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OF THE

MEDICAL SOCIETY

OF

LONDON.

INSTITUTED IN THE YEAR 1773.

VOL. I.

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FOR CHARLES DILLY, IN THE POULTRY.

M.DCC.XCII.

PREFACE.

NOTHING has contributed more to the advancement of ſcience, than the eſtabliſhment of literary ſocieties: theſe excite a generous ardour in liberal minds, and raiſe even envy itſelf into uſeful emulation.

In that ſcience, which rational eſtimation has placed firſt in the ſcale of honour; the ſcience which propoſes the nobleſt objects for its end, the preſervation and reſtoration of health; the improvements which have already reſulted from the formation of ſocieties are well known to the medical world.

The principal part of our knowledge muſt be ever derived from comparing our

own obſervations with thoſe of others. In this view the utility of ſocieties, which, afford an opportunity for the mutual communication of our thoughts, muſt be ſufficiently apparent. Deceaſed authors cannot ſolve our difficulties, nor will the obſervations made in other ages and climates, hold always true in our own.

There are ſome circumſtances peculiarly favourable to a riſing ſociety; each member thinking the honour of the aſſociation in ſome meaſure dependent upon himſelf, is ſtimulated to the higheſt exertion of his powers: unawed by the fame, and fearleſs of being eclipſed by the luſtre of his predeceſſors, no damp is caſt upon the vigour of that genius, which can alone produce great diſcoveries.

The inſtitution of this Society is to give the practitioners in the healing art, frequent

quent opportunities of meeting together, and conferring with each other, concerning any difficult or uncommon cafes which may have occurred; or communicating any new difcoveries in medicine which have been made, either at home or abroad.

Medical papers, which may tend to the advancement of the fcience, will be received by the Society; and fuch as may be deemed worthy of publication, carefully preferved, until fufficient matter for a volume fhall be collected.

Many ufeful facts are loft from the want of a proper opportunity of conveying them to the world; and though, when confidered feparately, they may not be of fufficient importance to claim the attention of the public, yet when a number of them are collected together, they may become highly deferving of notice: to fuch facts,

when properly authenticated, the Society will always be particularly attentive.

In order to excite practitioners to bring those talents to light, which would otherwise lie buried, and useless to the community, the Society, on its first institution, proposed to hold forth honorary rewards to those who should improve the medical art.

They have likewise founded a medical library, that its members might have an easy access to the best ancient and modern authors.

Further to promote these intentions, Dr. LETTSOM, one of its earliest, most active, and steady members, has, with unequalled generosity, given to the Society a spacious freehold house, in which, besides rooms for the meetings and other purposes

poſes of the Society, there is a library capable of containing ſeveral thouſand volumes.

The ſame very worthy and zealous member, has alſo veſted in the public funds, a ſum of money ſufficient to enable the Society to give annually a Gold Medal of the value of ten guineas, ſubject to the regulations hereafter to be mentioned.

The Society, with the greateſt pleaſure and gratitude, record theſe ſplendid donations, which ſo fully enable them to execute their original plan; and although *nothing ſimilar has been hitherto attempted in this kingdom*, yet, they hope that the example may appear not altogether unworthy of imitation.

In printing the Memoirs of the Society, the *Fellows* and *Correſponding Members* are diſtinguiſhed by initials affixed to their names, from the other reſpectable gentlemen of the faculty, who have kindly furniſhed valuable communications.

In the recollection of the enjoyment of the company and labours of their members, the Society cannot but regret the loſs of any individual of their body; to preſerve, however, ſome honourable memorial of their former aſſociates, it is propoſed to introduce, in the publications of the Society, memoirs of their deceaſed members.

The members of this Society have extended its foundation as much as poſſible: wiſhing to riſe ſuperior to all low diſtinctions, they have endeavoured to render every

every perſon uſeful in that branch of the ſcience to which he properly belongs.

Animated with an ardent deſire of promoting medical knowledge, and the good of the community, the Society lay the following volume before the public, and requeſt the further aſſiſtance of the faculty, in order to render their labours more extenſively beneficial to mankind.

THE Society conſiſts of Phyſicians, Surgeons, and Apothecaries; and others, verſed in ſciences connected with medicine; divided into Fellows, Honorary, and Corresponding Members.

The Fellows alone direct the affairs of the Society, and are eligible to any office.

No

No perſon is eligible as a Fellow, unleſs reſident in the city of London, or within ſeven miles thereof; nor is any perſon reſiding *within* that diſtance, eligible as a Correſponding Member.

No Phyſician is eligible as a Fellow, who is not a member of the college of phyſicians of London, or who does not produce a diploma, and teſtimonials of his having ſtudied medicine regularly at ſome univerſity.

No Surgeon is eligible as a Fellow, who has not been approved of by the court of examining Surgeons of London.

Every candidate for admiſſion as a Fellow of the ſociety, muſt be recommended by three or more Fellows on their perſonal knowledge; but the recommendation of a Correſponding or Honorary Member may

be

be founded on an acquaintance with his character or writings.

The recommendation, containing the profession and place of abode of the person proposed for election shall be delivered to one of the Secretaries, and first read in the council; that they may be satisfied that the person recommended has been informed of the regulations of the Society, and is eligible according to its statutes: It shall then be read at the ensuing meeting of the Society, and hung up in the common meeting room for *three* succeeding ordinary meetings, if the recommendation be of an *honorary* or *corresponding* member; but if of a *fellow*, it shall be hung up for *six* ordinary meetings; and on the last of these meetings, the votes shall be taken by ballot, if eight Fellows be present; and if three-fourths of the Fellows present ballot

in favour of the candidate, he ſhall be declared duly elected.

If it appear upon the ballot, that the perſon propoſed, is *not* elected, no notice thereof ſhall be taken in the minutes.

If any perſon who has been elected a Correſponding Member ſhall come to reſide in London, or within ſeven miles thereof, and deſire to continue in the ſociety, notice thereof ſhall be hung up in the meeting room for three ſucceſſive nights: and on the third he ſhall be balloted for as a Fellow, and if elected, ſhall be admitted on making the uſual payment and ſigning the obligation.

Any Fellow, going to reſide in the country ſhall, if he deſire it, be conſidered as a Correſponding Member during his abſence.

Cor-

Perſons of diſtinguiſhed character, eminently verſed in ſciences *connected with* medicine, may be elected as *Honorary* Members.

Honorary and Correſponding Members have the privilege of being preſent at all meetings of the Society.

No proprietor of any empyrical noſtrum can be a Member of this Society.

REGULATIONS *respecting the Gold Medal, founded in Commemoration of* Dr. John Fothergill.

1. THAT the Medal be given annually to the author of the best Dissertation, on a subject proposed by the Society, for which the learned of all countries shall be invited as candidates.

2. Each Dissertation shall be delivered to the Secretary, written in a legible hand, in the Latin, English, or French language, on or before the first day of November.

3. With it shall be delivered a sealed packet, with some device on the outside; and within, the author's name and designation.

4. The same device shall be put on the Dissertation,

Diſſertation, that the Society may know how to addreſs the ſucceſsful candidate.

5. There ſhall be a Committee appointed by the Society, for the purpoſe of adjudging this Medal, conſiſting of the Council; to whom ſhall be joined ſuch other members as the Society ſhall think proper; and their ſentence ſhall be final.

6. The Medal ſhall be adjudged on the 8th day of March, in each Year, that being the birth-day of the late Dr. FOTHERGILL. The firſt Medal was adjudged in the year 1787.

7. No Diſſertation with the name of the author affixed can be received, that the Committee may decide on the merits of each, without any knowledge of, or partiality for, the author.

8. All

8. All the Diſſertations, the ſucceſsful one excepted, ſhall be returned, if deſired, with the ſealed packets unopened.

9. The Society propoſe to give *Two* SILVER Medals annually: One of which ſhall be adjudged for the beſt Eſſay or Eſſays, read before the Society within the Year, written by a FELLOW; the other for the beſt Eſſay, or Eſſays, by a CORRESPONDING MEMBER, or by any perſon, NOT a member of the Society.

10. Any Gentleman who has had the honor of acquiring the *Fothergillian* MEDAL, cannot come into competition for the SILVER MEDAL, at the adjudication of the Medals *in the enſuing Year*.

The following Queſtion was propoſed as the ſubject for the firſt Prize Medal:

"*What*

"*What diseases may be mitigated or cured*
"*by exciting particular affections or passions*
"*of the mind?*"

Which was adjudged in favour of Dr. William Falconer, of Bath, Corresponding Member of the Medical Society.

The following Question was proposed as the Subject for the Prize Medal for the year 1788:

"*How is the human body in health, and*
"*in a diseased state, affected by different*
"*kinds of* AIR?"

Question for the year 1789,

"*What circumstances accelerate, retard,*
"*or prevent the progress of* INFECTION?"

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MEMOIRS

MEMOIRS
OF THE
MEDICAL SOCIETY
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ARTICLE I.

On the Character of ÆSCULAPIUS, *in a Letter addressed to* JOHN COAKLEY LETTSOM, M. D. F. R. S. &c. *and by him communicated to the Medical Society of London.*

Prefatory Letter to Dr. LETTSOM.

" SIR,

" YOU desire me to send you my
" opinion concerning Æsculapius,
" the reputed God of Physic. In con-
" sequence of this, I transmit to you an
" account of this Deity from papers which
" I formerly drew up. It is only a part of

" a larger Treatise, in which I have con-
" sidered the history of the principal gods of
" the Gentile world. And in the process
" of this inquiry I have endeavoured to
" shew, first, that most of these deities
" were but one: and that their history
" relates ultimately to the same object:
" and in the next place to intimate, what
" the prototype, that original object, was.
" As this is only a part of a larger work,
" the account, which I give, may ap-
" pear sometimes imperfect; and my in-
" ferences not so plain, as might be wished:
" for they sometimes depend upon an an-
" tecedent history, with which you are
" not acquainted. It will therefore be
" necessary, in the perusal of the follow-
" ing Treatise, to make this allowance.

" I am, Sir,

" Your most sincere Friend

" and humble Servant,

" The Author."

London,
December, 1785.

CONCERNING THE

CHARACTER

OF

ÆSCULAPIUS.

HAVING given examples of the variety, and at the same time, identity of the Gentile divinities; and, having particularly described Apollo, Pan, Priapus, Jupiter, Neptune, and some others of the most distinguished characters, in the performance above alluded to, I proceed now to Æsculapius; or, as he is expressed by the Greeks, Asclepius. For this history we must not depend solely upon the writers of Greece, as their evidence cannot be admitted without some restriction. It appears plainly, that they oftentimes misinterpreted their ancient hieroglyphical

histories, having lost sight of the original purport. But before I apply to the mythology of Greece, I shall consider the accounts afforded from Asia Minor; and those still more early from Phœnicia and Egypt.

According to the learned Sir John Marsham, the Æsculapius of Greece was a thousand years more recent than the deity of the same name among the [a] Egyptians. By this he seems to intimate, that they were two distinct persons: but they were undoubtedly the same; and this may be proved from their history. Therefore this only should have been said by the learned writer above, that Æsculapius was reverenced in Egypt one thousand years before he was known in Greece. As his history was manifestly imported, it will be proper to apply to persons of those countries from whence it came. He will be found to be represented under various characters, like

[a] Æsculapius Græcus mille annis recentior Ægyptio.
Marsham Canon Chron. p. 43.

the persons of whom I have before treated: but of all these characters the principal is that of a physician. This at first may make his department seem rather limited, and not afford that considerable character, which he will be found to maintain. It will however appear, upon examination, that he was esteemed the principal deity; the same as Jupiter and Apollo; the same also as Osiris, Hermes, Thoth, and Apis the physician. To these others may be added, each of whom at particular times was reputed chief.

Of his Worship and Titles.

ÆSCULAPIUS was much reverenced in Asia Minor; and had many temples in Caria and Ionia, and particularly at Pergamus: being greatly honoured by the people of those parts. Aristides of that country mentions his being worshipped under the title of Ζευς Ασκληπιος, or Jupiter Æsculapius, and he gives him the following high

character—[b] Ζευς Ασκληπιος—ὁπως, εν τοις ἱεροις ειρηται· ὁυτος εσθ', ὁ το παν αγων και νεμων, Σωτηρ των ὁλων, και φυλαξ ἁπαντων. *This is the deity, as we learn from the sacred writings, who manages and directs the whole world: the conservator of all things, and guardian of the immortal gods.* These gods, whatever their titles may have been, were in reality dæmons, or men [c] deified. Of these there was one principal and parent of the rest, and among the many denominations, with which he was distinguished, one was Æsculapius.

He was esteemed the chief deity at Memphis, where a live [d] serpent was preserved, as an emblem of him, and treated with a religious reverence. From hence we may perceive, that he must have been

[b] Aristides. Orat. vi. p. 67.

We find him represented in the same manner by the Emperor Julian—Σωτηρα των ὁλων. Orat. iv. p. 153.

[c] Upon this subject the reader may have recourse to a very valuable treatise, by the Rev. Mr. Farmer, of Walthamstow.

[d] Ælian de Animal. l. xvii. c. 39. p. 912.

the

the ſame as [e] Apis, the god of phyſic: who was alſo looked upon as the principal god of that place. They indeed eſteemed him the ſovereign of all. We therefore muſt not wonder, if we find him ſtyled [f] Θεος ενεργεϛατος, *a deity the moſt energetick and operative of any.* [g] Θεος μεγιϛος, *the greateſt of all gods.* He was, we find, the ſupreme of the whole; yet he was only a dæmon: and we may judge of his hiſtory and antiquity from the words of Sir John Marſham. [h] Æſculapius Memphites inter primos hominum numeratur, qui opinione hominum Dii facti ſunt.

He muſt have been the ſame as [i] Sydyc, *the man of juſtice*, recorded in the hiſtories of Phœnicia, though thoſe hiſtories are

[e] Apis in Civitate Memphi ſolis inſtar excipitur.

Macrob. Sat. l. i. c. 21. p. 212. See alſo Strabo. l. xvii. p. 1058. and Ælian above.

Æſculapius the ſame as Oſiris. Diodorus. l. i. p. 19. and p. 76.

[f] Ælian de Animal. l. xi. c. 10. p. 615.

[g] Lucian de Sacrificiis. vol. i. p. 359.

[h] Chron. Can. ſect. i. p. 41.

[i] צדוק. Juſtus.

ſadly confounded; as they now ſtand in the verſion of Philo Byblius. Æſculapius was Ζευς, or Jupiter: and Sydyc muſt have been the ſame; for his ſons were the Διοσκȣροι, Dioſcuri. [k] Ἐκ τȣ Συδυκ Διοσκȣροι. They are ſaid to have been ſeven in number, and Καβειροι, *the deities called Cabiri.* But in another place Æſculapius is made the [l] ſon of Sydyc, by which ſon muſt be meant a ſecond Æſculapius, and he is ſtyled αδελφος, or brother to the reſt; if the reading be true. We have a particular hiſtory given of theſe Cabiri by Damaſcius in Photius, where the name of Æſculapius is ſubjoined, but the word αδελφος is not mentioned. [m] Συδυκῳ εγενοντο ἑπτα παιδες, ὓς Διοσκȣρȣς ἑρμηνευȣσι, και Καβειρȣς, Ογδοος δε εγενετο επι τȣτοις ὁ Εσμȣνος, ὃν Ασκληπιον ἑρμηνευȣσι. *To Sydyc were born ſeven ſons, who are by interpretation the Dioſcuri, or ſons of Jupiter, and Cabiri; to theſe was an additional eighth, who is eſteemed the ſame as Æſculapius.*

[k] Sanchoniathon apud Euſeb. P. E. l. i. c. 10. p. 36.

[l] Ογδοος αυτων αδελφος Ασκληπιος. Ibid. p. 39.

[m] Photii Biblioth. p. 1074.

Philo

Philo affords a ſimilar hiſtory of theſe perſons. [n] Εκ τȢ Συδυκ Διοσκȣροι, η Καϐειροι, η Κορυϐαντες, η Σαμοθρακες. *From Sydyc came the perſons called Dioſcuri, Cabiri, Corybantes, and Samothraces.* The laſt name was given them from their being particularly worſhipped in Samothracia: where their rites were eſteemed the moſt ſolemn and myſterious of any, and of the higheſt antiquity. They are ſtyled by [o] Caſſius Hemina θεȣς μεγαλȣς, θεȣς χρηστȣς, θεȣς δυνατȣς· *great, benevolent, and powerful deities.* As they were the ſame as the Corybantes, their father Sadyc or Sydyc, muſt have been Corybas; and this hiſtory may be further illuſtrated from the account given of that perſon. We accordingly find Corybas ſtyled in an Orphic hymn, [p] Νυκτερινον Κȣρητα, *the nocturnal Cures:* Αιολομορφον ανακτα, *the prince of various forms,* θεον διφυη, *a deity of a two-fold nature;* μορφην δνοφεροιο δρακοντος, who was repreſented under *the figure of a dark ſer-*

[n] Euſeb. P. E. l. i. c. 10. p. 36.
[o] Macrobii Saturn. l. iii. c. 4. p. 276.
[p] Orph. H. 38.

pent,

pent, under which figure Æſculapius is continually found. Corybas therefore and Æſculapius were the ſame.

Of the CABIRI.

THE Cabiri are ſaid above from Philo to have been ſeven in number, and all ſons, but they are differently deſcribed by other writers. [q] Acuſilaus Argivus made them the children of Camilus, and ſix in number: and they were ſaid, according to Pherecides Syrus [r], to conſiſt of three ſons, and three daughters. According to Mnaſeas, whoſe authority is quoted in the Scholia to [s] Apollonius Rhodius, there were only four Cabiri: and there is ſtill a further difference of opinion concerning them, as may be found upon conſulting their hiſtory. Camilus, the ſuppoſed father, as mentioned from Pherecydes by Strabo, is

[q] Strabo. l. x. p. 724.
[r] Strabo. above, p. 724.
[s] Scholia to. l. i. v. 917.

by

by other writers expreſſed Cadmilus and Caſmilus, the ſame as [t] Hermes. Herodotus takes notice of a temple dedicated to the Cabiri at [u] Memphis, where we know Æſculapius was the chief deity, Memphim urbem præſentiâ numinis Æſculapii [w] claram. Two live ſerpents were preſerved there and held ſacred, thence we may be aſſured that Cadmilus, Sydyc, Corybas, Hermes, Jupiter Apis, and Æſculapius, were the ſame perſon: and they will be found all to terminate in the Orphic Protogonus, the reputed firſt man: the ſame who is repreſented [x] Ωογενη, διφυη, *ſprung from an egg, and of a twofold nature,* γενεσιν Μακαρων θνητωντ' ανθρωπων, from whom all, both *the Makares, or deified perſons, and thoſe who are mere mortals, are deſcended.*

[t] Ὁ δε προςιθεμενος Κασμιλος, Ἑρμης εςιν. Schol. above, l. 1. p. 917.

[u] Herod. l. iii. c. 37. p. 214.

[w] Marcellinus. l. 22. p. 277. Ælian de Animal. l. xvi. c. 39. p. 912.

[x] Orph. Hymn. 5.

We

We have ſeen that according to Philo, the ſons of Sydyc, the man of *juſtice*, amounted to ſeven, with a perſon added, who made eight. But this does not appear to be accurate, and is contradicted by every other writer. If then we correct the Phœnician mythology by the Samothracian, we may allow that Sydyc had a family of ſeven perſons: and that Æſculapius, the ſame as Sydyc, made the eighth. In acting thus we ſhall hardly fall ſhort of the truth. The difference in the numbers ſpecified ſeems to have ariſen from this. If the whole of the family was included, they amounted to eight, and the eighth perſon is particularly taken notice of, as being of more conſequence than the reſt. If ſix are mentioned, then they conſiſt of three ſons, and three daughters. But if four only, then we may infer that it was the [y] male part of the family: and ſtill there is one diſtinguiſhed perſon ſpecified, whom we may preſume to have been the head of the four. This is confirmed by a

[y] Some include Ceres and Proſerpine among the four, but this is only ſurmiſe.

paſſage

passage in the Scholia, to which I have before applied. For the author in that passage makes mention of three Cabiri, and at the end subjoins a fourth, as the principal of the whole. [z] Ὁ δε προσιθεμενος τεταρτος Κασμιλος, Ἑρμης εστιν, ὡς ἱστορει Διονυσιδωρος. From whence we find that the fourth person annexed was Casmilus, who was the same as Hermes. Now it has been shewn, that Hermes was the same as Sydyc, the father of all, the same also as Æsculapius.

Concerning the Time of his Appearance.

THE æra of Sydyc may be further known from the person whom he is supposed to have wedded. Σαδυκῳ δε λεγομενῳ δικαιῳ μια των Τιτανιδων συνελθουσα γεννᾳ κ. τ. λ. Euseb. l. i. c. 10. p. 37. From hence we learn, that Sydyc, denominated the Just, had a wife of the Titanian race, and

[z] See Scholia, above, v. 317.

con-

consequently of the Titanian times, who bore him a son, &c. These times were antecedent to the flood of Ogyges and Deucalion, and before the renewal of the world: when Sydyc was in his primitive state. The son born is said to have been Æsculapius; who is made the offspring of many fathers. This was owing to a particular mistake of the Grecians, in respect to the Eastern mode of expression. When a person was said to be the son of Sydyc, or Themis, that is, of *Justice*, it only meant, that he was a just man. A son of Cronus was a man of ancient days: a son of Prometheus, a man of wisdom. A son of the earth, an husbandman: a son of the ocean, one, who was connected with the sea. It is a common Hebraism. Hence we read in the Scriptures of a son *of valour* for a *brave man*: of a son of *a murderer* for a person *guilty of blood*. Also of a son *of peace*: a son *of consolation*: a son *of perdition*: a son *of Belial*: and a son *of the morning*.—[a] *How art thou fallen, O*

[a] Isaiah, c. xiv. v. 12.

Lucifer, thou ſon of the morning! This is ſpoken of a perſon riſing to the zenith of his glory, but caſt down for his impiety. The ſame mode of expreſſion is to be found in Homer, where he is ſpeaking of Memnon the Æthiopian, who ſlew Antilochus.

[b] Ὃν ῥ' Ἠοῦς εκτεινε φαεινης αγλαος ὑιος.

Alſo in Virgil, where he makes mention of the ſame perſon.

[c] Nunc quibus Auroræ veniſſet Filius armis.

But theſe poets, and the people of their times, took Eos, the ſame as Aurora, to have been the real mother of Memnon. Whereas in this inſtance *the ſon of the morning* ſignified merely Orientis Filius, a man born in *the eaſt*, an oriental perſon. Theſe miſconceptions gave birth to many ideal parents: ſo that a perſon is often made his own ſon, and is brought under different degrees of relation to himſelf.

[b] Odyſſ. iv. v. 188.
[c] Æneid. l. i. v. 751.

It

It has been ſhewn, that Æſculapius was the ſame as Zeus or Jupiter, by the Dioſcuri, or Jove nati, being his children: yet we have ſeen him introduced as their brother. According to Stobæus he was the offspring of Pan, and Hephæſtobule.—[d] Πανος και Ηφαιςοϐȣλης. Pan was the ſame as Sydyc, the origin of all mankind: but repreſented under the character of an huſbandman and ſhepherd. As to Hephæſtobule, it ſeems a ſtrange compound: for the word [e] *βȣλη* is a Grecian term, and could not, I think, be the termination of the ancient and original name. What the Grecian mythologiſts have expreſſed Hephæſto-bule, was probably in the Egyptian language Hephæſta-bala or baala. By this is ſignified the lady or princeſs Hephæſta, in other words the deity [f] *of fire.* Through the whole hiſtory of Sydyc or Æſculapius, under whatever denomination, there is an uniform reference to this element: and

[d] So it ſhould be read inſtead of Ϛπανος, &c.
Stobæus in Eclogis Phyſicis, p. 117. l. 28.

[e] Analogous to בעלת.

[f] Hephæſta is the feminine of Ἡφαιςος, or Vulcan.

6 the

the person, who had the name of Hephæsta in Egypt, was in Syria styled Νȣρια, and Νωρια, a name of the same [g] purport. It was by the Grecians translated Πυῤῥα, Pyrrha: which is precisely of the same signification. In consequence of this, the wife of Deucalion, the reparator generis humani, is uniformly stiled Pyrrha.

His Improvement of Science.

ÆSCULAPIUS is said to have found out [h] letters, and his sons, the Cabiri, were the first of all men who made use of them in transmitting to posterity the re-

[g] Nour (נור) in Hebrew, and many other languages, denotes fire. Νȣρα εν τῃ Ἑϐραϊδι πυρ, ȣ κατα την βαθειαν γλωσσαν, αλλα και Συριακῃ διαλεκτῳ. Epiphanius. Hæres. vi. p. 82. If the context would permit, one would imagine, that the original reading was—ȣ μονον κατα την βαθειαν γλωσσαν, αλλα και. Epiphanius adds—φασι την Νȣριαν ειναι τȣ Νωε γυναικα. Ibid. The same is said of Pyrrha by Tzetzes.

[h] Ταυτα πρωτοι παντων ὑπεμνηματισαντο—οἱ Καϐειροι, ὡς αυτοις ενετειλατο Θεος Τααυτος. Euseb. P. E. l. i. c. 10. p. 39.

 cords

cords of Taautus or Thoth. The invention is likewiſe aſcribed to Toſorthrus, a ſuppoſed king of Egypt, but he is eſteemed the ſame as [i] Æſculapius. It is alſo attributed to [k] Menon, an Egyptian, who is juſtly imagined to have been the ſame as Menes, and to have lived before Phoroneus of Greece. The more general opinion has been, that letters were the invention of Taut or Thoth. [l] Πρωτος εςι Τααυῖος, ὁ των γραμματων την ευρεσιν επινοησας, ὁν Αιγυπτιοι μεν εκαλεσαν Θωυθ. It was Taautus, or as the Egyptians expreſs the *name Thouth, who firſt brought about the invention of letters.* This hiſtory of Thoth is mentioned by Socrates in the Phædrus of Plato: who takes notice of this perſon as a reputed deity of great antiquity, [m] των παλαιων θεων, *one of the moſt ancient gods.* αυτῳ δε ονομα τῳ Δαιμονι ειναι Θωθ, *and the name of this Dæmon, or deified perſon,*

[i] Ουτος εςιν Ασκληπιος. Syncellus, p. 56.

[k] Menonem quindecim annos ante Phoroneum antiquiſſimum Græciæ Regem. Pliny, l. vii. c. 56. p. 413.

[l] Euſeb. P. E. l. i. c. 10. p. 31.

Ταυῖος ευρε την των πρωῖων ςοιχειων γραφην. Ib. p. 36.

[m] Vol. iii. p. 274.

was

was Thoth. By him the most useful arts were found out, και δη και γραμματα: *among the rest, letters.* Ἑρμην δε Ἑλληνες [n] μετεφρασαν. *The Grecians render this person Hermes.* Accordingly, we find, from [o] Plutarch and other writers, this invention attributed to Hermes. Ἑρμης λεγεται θεων εν Αιγυπτῳ γραμματα πρωτος ευρειν. *Hermes, of all the gods in Egypt, is said to have been the first, who found out letters.* Hence we may infer, that these were all the same person under different denominations. In another passage [p] of Plato, the writing found out is supposed to consist of those elementary and alphabetical letters, which are still in use. But this cannot be true. And we are told for certain from Manetho of Egypt, that the characters were [q] hieroglyphicks, and that he copied some of them from [r] pillars, εν γῃ Συριαδικῃ (forte

[n] The same is said by Manetho. Θωθ πρωτος Ἑρμης. *Thoth was the first Hermes.*

[o] Plutarch Sympos. l. ix. q. 3. p. 738.

[p] In Philebo. v. 2. p. 18. Hermes is here styled Θευθ.

[q] Syncellus. p. 40.

[r] Ερμȣ Στηλαι, *the pillars or obelisks of Hermes.* Ibid.

Συριγγικη), which had been engraved there by Thoth, the firſt Hermes. [s] Marcellinus mentions ſome curious inſcriptions of this ſort, which were to be ſeen in the Syringes of Upper Egypt. Theſe were ſubterranean paſſages, which the ancient Egyptians had formed in the rock with many windings: et exciſis parietibus, volucrum ferarumque genera multa ſculpſerunt, et animalium ſpecies innumeras, quas hieroglyphicas literas appellârunt. He ſpeaks of them as having been executed before the deluge. And Manetho would fain give them the ſame age: and mentions their being tranſlated [t] *μετα τον κατακλυσμον, after the deluge:* and, as he intimates, ſoon after. The letters, we find, were certainly [u] hieroglyphical, and have been attributed to a perſon of various denominations, one of which was Toſorthrus, the inventor of many arts. [w] Ουτος Ασκληπιος Αιγυπτιοις δια την

[s] Marcellinus. l. xxii. p. 263.

[t] They are to be ſeen entire at this day, and have been viſited by Pocock, Norden, and others.

[u] Syncellus. p. 40.

[w] Ibid. p. 56.

ιατρικην

ιατρικην νενομιςαι, και την δια ξεςων λιθων οικοδομιαν ἑυρατο· αλλα και γραφης επιμεληθη. *He is esteemed the same as Æsculapius by the Egyptians for his knowledge in physick. He first found out the erecting of buildings with stones cut and smoothed. He also made the science of letters his study and care.* Some have attributed the science of physick to Apis, and supposed that Æsculapius only improved the art. But he was the father of the Cabiri, and esteemed μεγιςος θεος, *the supreme of all.* Σωτηρ των ὁλων, *the conservator of the whole world*; and stands too high to have received instructions from Apis. Indeed I take the name Apis to have been only a mark of relation: and given to a person called by way of eminence, *the Father*, who was the same as Æsculapius, Protogonus, and Sydyc. Æsculapius must have been also the same as the serpentine deity Cneph, who was represented with an egg before his mouth, to signify, as is gene-

* Clemens Alexand. Strom. l. i. p. 362.

rally ſuppoſed, that he was *ωογενης*, or produced from the [y] mundane egg. He was looked upon as the moſt ancient of the gods, and ſuperior to all: and we have ſeen that Æſculapius was eſteemed the ſame. The god Pan was held by the Ægyptians in the like eſtimation. Accordingly Herodotus tells us, [z] Παρ' Αιγυπτιοισι Παν μεν αρχαιοτατος, *Among the people of Egypt, Pan is looked upon as moſt ancient of the gods.* In the orphic verſes he is ſtyled, [a] παντοφυης, *the producer of all things*; γενετωρ παντων, *the univerſal father.* Theſe three, therefore, muſt have been the ſame perſon, who was differently denominated in his ſeveral places of worſhip.

[y] They repreſented him of an human ſhape, of a dark complexion, inclining to black.—ερμηνευειν δε το ωον τον κοσμον. *They interpreted this egg to be the world.* Euſeb. P. E. l. iii. c. 11. p. 115.

He might be ſaid both to have proceeded from the egg, and to have produced it.

[z] L. ii. c. 145. p. 174.

[a] Orph. H. 10.

Concerning

Concerning the Emblematical Serpent.

WE have ſeen above that the deity Hephæſta was reputed to have been the wife of Pan, and the mother of Æſculapius. She is alſo ſaid to have been the wife of the firſt Memphite king Nechorophis. The reaſon of this perſon being eſteemed a monarch in Egypt, and Hephæſta holding the ſame rank with him, was owing to that cuſtom of colonies from all parts prefixing the names of their anceſtors to the liſts of their princes. Nechor in the [b] language of Egypt ſignified a king; and Ophis denoted a *ſerpent*, under which ſymbol this chief anceſtor was worſhipped. His various titles have been enumerated, among which were Hermes and Æſculapius: and upon gems, coins, and marbles, inſcribed with theſe names, a ſerpent is continually to be [c] found. Cneph was

[b] What is here rendered Nechor, is at other times expreſſed Necho, Nechao, Necus, and Negus.

[c] See Spanheim de uſu & præſtantiâ Num. v. i. p. 12, 16, 217, and 417.

ſtyled [d] Agathodæmon, or *the good Dæmon*, and Æſculapius was eſteemed the ſame, on account of the benefits which he beſtowed upon mankind. And as he was ſuppoſed to have had a return to life, and a renewal of youth, he was on that account worſhipped under this ſymbol of a ſerpent; the meaning of which I have mentioned [e] before. The Phœnicians gave the name of Agathodæmon both to the deity, and to the animal; and the [f] Egyptians did the ſame. At Thebes, where Cneph was particularly worſhipped, two ſerpents were

[d] Sanchoniath: apud Euſeb. P. E. l. i. c. 10. p. 41.

[e] *Becauſe it gets rid of its old age, and grows young*; επει το γηρας αποβαλλει. Scholia in Ariſtoph. Plutum. v. 773. Ælian mentions the ſpring ſeaſon, ὁταν αποδυσηται το γηρας ὁ οφις. De Animal. l. ix. c. 16. p. 499.—γηρας εκδυς μεταφορα απο των οφιων. Scholia in Ariſtoph. Ειρηνη. v. 335.

[f] Φοινικες δε αυτο (το ζωον) αγαθον δαιμονα καλεσιν, Ὁμοιως οἱ Αιγυπτιοι Κνηφ επονομαζεσι. *The Phœnicians call this animal Agathodæmon, and the Egyptians annex the ſame name to Cneph.* Philo apud Euſeb. l. i. c. 10. p. 41.

See alſo Plutarch. de Amatorio. vol. ii. p. 755.

preſerved

preserved alive, and called after their[g] manner. Philo Byblius speaking of a complex hieroglyphick, in the middle of which a serpent was described, says, that the Egyptians placed it there, [h] τον Αγαθον Δαιμονα σημαινοντες, *as an emblem of the good Dæmon.* Plutarch, however, will not allow that any such serpents were preserved at Thebes, nor that any mortal man was esteemed a deity. He insists[i] ὡς θνητον Θεον ȣδενα νομισαντας, αλλα ὁν καλȣσιν αῦτοι Κνηφ αγεννητον οντα και αθανατον. *That the people of Thebes did not allow any god to be a deified man: and as to their god Cneph, they looked upon him as an original, unproduced, and immortal being.* Porphyry also speaks of him as a [k] mysterious, incomprehensible essence. But these were all late refinements, concerning which I shall treat hereafter.

[g] Herodot. l. ii. c. 74. p. 138.
[h] See Eusebius above, p. 42.
[i] Isis et Osiris, v. i. p. 359.
[k] Λογος δυσευρετος, και κεκρυμμενος, και ου φανος και νοερως κινειται. Porphyry apud Euseb. P. E. l. iii. p. 115.

As

As to the two ſerpents, which Plutarch denies to have been ever kept at Thebes, Herodotus ſaw them, and deſcribes them very [l] particularly, and I think we may ſafely truſt him, when he profeſſes to have been an eye-witneſs. Serpents therefore were certainly preſerved in that temple by the Thebans. And in reſpect to the aſſertion, that no mortal deity was there worſhipped, the very term Agathodæmon ſhews the contrary. Whoever was ſtyled in this manner, muſt have been a mere [m] mortal, for by Dæmon is ſignified *a man deified.* It is a title which the Egyptians would never have beſtowed upon the Eternal God. There is too much reaſon to think, that from the baſeneſs of their worſhip they had nearly, if not entirely, loſt ſight of him. Heſiod informs us, that the perſons eſteemed Dæmons were men of the golden age.

[l] Herodot. l. ii. c. 74. p. 138. He alſo mentions a ſacred crocodile being kept there alive, l. ii. c. 69. p. 136. A live ſerpent was preſerved in the chief temple at Memphis. Ælian de Animal. l. xvi. c. 39. p. 912.

[m] See the treatiſe by the learned Mr. Farmer.

[n] Αυταρ επει κεν τουτο γενος κατα γαια καλυψεν
Τοι μεν Δαιμονες εισι—
Εσθλοι, επιχθονιοι, φυλακες θνητων ανθρωπων.

After this race had been buried and extinct, they became Dæmons, a kind of benevolent beings; who are converſant upon the earth, and the guardians of mankind. Plutarch himſelf mentions it, as the opinion of the moſt learned writers, that there were both good and bad Dæmons, and ſo far from any of them being eſteemed *the great firſt cauſe*, they were often looked upon as of an inferior order to thoſe principally held to be gods. [o] Δαιμονας ὑπηρετας των θεων. Porphyry makes a ſimilar diſtinction: and ſpeaking of improper ſacrifices, he ſays, whoever firſt exacted them, [p] ουκ ην αρα θεος, ουδε τις αψευδης και αγαθος δαιμων· *he was neither a god, nor a benevolent and juſt Dæmon*: in this place and others he may be

[n] Opera et Dies, v. 121.

[o] De defectu Orac. v. ii, p. 418, 419.

[p] Porphyry περι αποχης. See Euſeb. P. E. l. iv. p. 153, 174; alſo l. iii. p. 141-2.

too

too [q] nice in his diſtinctions; yet from every authority, we may be aſſured that the only true God could never be eſteemed a Dæmon.

It ſeems, I think, manifeſt from what has been ſaid, that Cneph could not be the Supreme Deity. He was the ſame as Sydyc, *the man of Juſtice*, whoſe family conſiſted of the memorable eight perſons, the ſame alſo as Protogonus, [r] διφυης ωογενης, that *firſt-born, two-fold being, who aroſe from the myſterious egg*, who was the original of the ever-happy Macares, or immortals; and of thoſe alſo who were mere men. He likewiſe could have been no other than

[q] I mean too nice in diſtinguiſhing between the popular gods and Dæmons, for they were in general the ſame. The author of the Orphic Hymns calls Neptune, ποτνιε Δαιμον, *reverend Dæmon*; Apollo, φωσφερε Δαιμον, a *light-producing* Dæmon; and Jupiter, Δαιμονα Ζηνα μεγαν. See Hymns xvi. v. 8. xxxiii. v. 5. lxxii. v. 1. Many other inſtances might be produced. Plato ſpeaks of Dæmons and their origin, and mentions among the principal, Oceanus Tethys, Ops, Jupiter, and Juno, and with theſe, all that had any ſuppoſed relation. Timæus, vol. iii. p. 40, 41.

[r] Orph. Hymn v.

Camephis,

Camephis, who was mentioned in the Hermetick writings, as [r] προπατερος, και παντων προγενεϛερȣ; *the forefather and first-born of all men.* In respect to the title of Agathodæmon given to two deities, we may from hence, and from the preceding history, be assured, that they were the same person: and that Cneph of Thebes was no other than Æsculapius of Memphis; the great physician Apis, the father, and supposed conservator of all mankind.

The Grecian Account of Æsculapius.

THESE accounts of this deity, though transmitted through the hands of the Greeks, were originally from Egypt and the east, as is manifest from the evidence which has preceded. It will now be proper to obtain his history from the Grecians themselves, as it was preserved in the cities

[r] In Eclogis Physicis Stobæi, p. 120. Iablonsky, l. i. c. 4. p. 96.

and

and temples where he was worſhipped, and as it is to be found in their mythological writings.

In proſecuting theſe views we muſt take care not to be miſled with what the Grecians have alleged concerning the births and deaths of theſe deities, and the particular places of their reſidence. For the whole hiſtory was imported, and the perſons whom they have given out to be natives, were all foreign to their country. We muſt likewiſe give little heed to the degrees of relation which they have eſtabliſhed; for they will be found for the moſt part very contradictory, and inconſiſtent, ſo that the hiſtory will confute itſelf. Their rites and mythology they copied from hieroglyphicks, which were not well underſtood even in the countries from whence they were borrowed. They were in their nature equivocal, and the true purport could not be preſerved long. There was only one hiſtory, from which the true meaning might have been obtained

by

by comparing; but with this hiſtory they were totally unacquainted.

Of the Birth of Æſculapius.

TARQUITIUS, as he is quoted by Lactantius, acquaints us, [t] ab incertis parentibus ortum Æſculapium, et expoſitum, That Æſculapius was of very uncertain parentage, and had been expoſed. And we are informed by Pauſanias, [u] *θνητην γυναικα ουδεμιαν μητερα, no woman of mortal race was his mother.* Yet according to Cicero he was the ſon of [w] Arſippus and Arſinoe, and is mentioned particularly as a phyſician. Pauſanias likewiſe makes him the ſon of [x] Arſinoe, and the grandſon of one Leucippus. In both inſtances he is made a deſcendant of Hippus, the myſtical horſe.

[t] Tarquitius de Viris illuſtribus. Lactant. de F. R. l. i. c. 10. p. 39.

[u] Pauſan. l. vii. p. 583.

[w] Cicero de Nat. Deor. l. iii. § 57.

[x] Pauſan. l. iii. p. 277. l. ii. p. 171.

horſe. By ſome he was repreſented as the ſon of [y] Vulcan: but the moſt popular opinion ſeems to have been, that he was the [z] ſon of Apollo, and the nymph Coronis. She was worſhipped at Sicyon, where he had alſo a temple, in which two live ſerpents were maintained. Coronis is by interpretation a [a] raven, and in the accounts given of her, there is often ſome hiſtory of that bird. The principal circumſtance is, that her lover Apollo had been deceived by the raven, which was by him changed from its original colour white to black.

It has been before obſerved, that Æſculapius came not regularly to birth, but was taken from the ſide of his [b] mother, and

[y] Cicero de Nat. Deor. l. iii. § 57. Cicero makes mention of four of this name.

[z] Υιον Απολλωνος, ὁν εγεινατο δια Κορωνις. Homer. H. 15.——Απολλωνα Ασκληπιῳ πατερα. Pauſan. l. vii. p. 583.

[a] Pauſ. l. ii. p. 137. Of the Ravens delay, ſee Hyginus, p. 492; alſo Ovid. Faſt. l. ii. v. 253.

[b] Ex utero exſectum Æſculapium. Hyginus, Fab. ccii. p. 334.——Exciſum utero matris. Lactant. Placidus, in Ovid. Metamorph. l. 2. Fab. vii.

was

was preserved during his childhood in the cavern of Chiron. Apollo

> ——[c] Natum flammis uteroq. parentis
> Eripuit, geminiq. tulit Chironis in antrum.

This circumstance of his birth is very similar to the account given of Bacchus: it was looked upon as a renewal of life, and he was esteemed to have been a second time conceived in this cavern. Accordingly, the sea nymph Ocyrhöe intimates as much in her prophecy concerning him, though she seems to make it commence from his being a second time exposed to fire.

> [d] Cresce, puer, dixit; tibi se mortalia sæpe
> Corpora debebunt: animas tibi reddere ademptas
> Fas erit: idq. semel diis indignantibus ausus
> Posse dare hoc iterum flammâ prohibebere avitâ,

c Ovid. Metam. l. ii. v. 629.
d Ovid. l. ii. v. 643.

Eque Deo corpus fies exſangue, Deuſque
Qui modo corpus eras; et bis tua fata
novabis.

This hiſtory is tranſmitted to us with a deal of falſe colouring; but the principal parts are plain, that the perſon ſpoken of ſhould *be a great benefactor to the world, and even raiſe the dead to life; that he himſelf from a deity ſhould be reduced to a ſtate of death; and from that ſtate ſhould be reſtored to a ſecond exiſtence.* Nay, *his being*, according to this prophecy, [e] *was to be twice renewed.* Ocyrhöe, who is introduced above as a propheteſs, is ſaid to have been a daughter of Oceanus, and was at laſt changed into Hippa, *a mare.*

I have mentioned the hiſtory of ſeveral deities, who after a ſtate of confinement were reſtored to life, and had a renewal of youth.

[e] The ſame is ſaid of Bacchus Protogonus.

Πρωτογονον—διφυη τριγονον Βαχειον ανακτα.

Orph. Hymn 29.

The two-fold thrice-begotten prince.

youth. This was particularly the caſe of Bacchus, and of Oſiris, the god of medicine. The latter was encloſed in an ark, or bier, and having been expoſed upon the waters, was loſt and extinct; and his death was commemorated with many tears. He was at length found, and reſtored; and he revived in the character of the youth Orus, the phyſician, the ſame, who was admitted to the converſe of the gods. The like we find told of Æſculapius, and in conſequence of this renewal of youth, he had a temple in Arcadia, ſtyled [f] Ἀσκληπιϐ παιδος ἱερον, *the temple of the boy Aſclepius.* Nor was the dove forgot, which was ſuppoſed to have tended him in his childhood. For near the temple above mentioned of *Æſculapius Puer*, ſtood Τρυγονος μνημα τροφϐ, *the monument of the dove, who was his nurſe.*

f Pauſan. l. viii. p. 651 and 667.
See notes to Fulgentius in Hyginus. p. 928, 9.

CORONIS.

THE raven alſo was farther commemorated; and the city of Corone in Meſſenia, ſo called from Coronis, was no other than the city of the raven. Why it was particularly ſo denominated, many reaſons were given: one was, that when they laid the foundation of the city, they found a [g] brazen figure of that bird. But a better reaſon may be inferred from the perſons there worſhipped: theſe were Bacchus, and Æſculapius, the ſuppoſed ſon of Coronis; and Artemis Diana, ſtyled above τρυγων παιδοτροφος, *the nurſing dove*. In the citadel was Minerva, or divine wiſdom, holding in her hand a [h] raven, which ſhews it was a ſacred emblem, and had a relation to the deities of the place.

[g] Pauſan. l. iv. p. 365.
[h] Ibid.

Concerning

Concerning a two-fold Reference in the Term Coronis.

IT has been mentioned concerning Protogonus, and ſome other deities, that they were ωογενεις, or *ſprung from an egg.* The ſame was ſaid of Æſculapius, as we find it intimated in the[i] Pſeudo-Mantis of Lucian: where a ſerpent in an egg is introduced, as a true emblem of this deity. The object to which it alluded, has been already pointed out, and the emblem Coronis muſt ſometimes have had a reference to the ſame. When it is ſaid of Æſculapius[k] Δια Κορωνις ετικτε, that *the heavenly Coronis produced him to the world:* this could not relate to the raven, which though connected with the hiſtory of the chief perſon, yet could have no concern with his ſecond birth; or with his birth at all. Coronis was certainly a name given by the poets, and mythologiſts, to a particular machine: the ſame in which the gods are

i Lucian, Pſeudo-Mantis. p. 870. Edit. Salmurii.
k Apollonius Rhod. l. iv. v. 616.

ſuppoſed to have been encloſed; and to have ſuffered a temporary death. Coronis is accordingly ſaid to have been a veſſel or float, whoſe extremities were equally raiſed and turned up like a creſcent, and as thoſe of an Indian canoe are in theſe days. It is ſo interpreted by the ſcholiaſt upon Homer, Κορωνις—[1] ναυς, επικαμπεις τας ακρας εχȣσα. *By Coronis is ſignified a ſhip which has its two ends bent and turned up.* The ſame may be learnt from Heſychius, Κορωνιδες, καμπυλοπρυμνοι νηες. *Coronides* (in the plural) *are ſhips with their prows turned upwards.* The name was adapted to veſſels of this form, from their repreſenting the lunar emblem, the myſtical machine Selene. This was the original Coronis: and the name was given from a bird of the ſea. It is certain that the Larus, Aithyia, and all the ſpecies of gulls and ſea mews, were made emblems of ſecure navigation, and of ſurviving in the waters: and all theſe birds were ſtyled Κορωναι, *Coronæ*, of the ſame purport as

[1] Iliad. iv. v. 170.

Coronides.

Coronides. This we may learn from Hesychius. Κορωναι, ἁλιαι, Αιθυιαι, Κολυμβιδες, *Coronæ, are sea birds, such as Aithyiæ,* by which *are meant coots and divers.* The ox or steer had a name of the same purport, Coronius, Κορωνιος, *μηνοειδη εχων κερατα βυς.* Hesych. *By Coronius is meant an ox which has its horns* (that is its budding horns) *like a crescent or new moon.*

From hence we may perceive that Coronis was a machine, the same as the *ναρθηξ* of Bacchus, the Cetus of Hercules, the Baris of Osiris, the λαρναξ of Deucalion: in which those persons were said to have been confined and exposed. And this confinement was represented as a state of death, and the place itself as a cavern: also as Hades and Tartarus. It is mentioned of Æsculapius, that like the Indian deity [m] Budda, he was taken out of the body of

[m] Expressed Βυττα, & Βυτα: an Indian philosopher and lawgiver: called also Budda. See Cœl. Rhodos. l. iv. c. 1. and Clemens Alexand. Strom. l. i. p. 359.

his mother, and came indirectly into the world, through an opening in the side, made for that purpose. This circumstance seems to be tacitly alluded to by Apollonius Rhodius, in a passage where he is speaking of the supposed anger of Apollo upon the death of Æsculapius. He was said to have been slain by Jupiter, though he afterwards revived.

[n] Χωομενος περι παιδι, τον εν λιπαρη Λακερεια
Δια Κορωνις ετικτεν επι προχοης αμυροιο.

Apollo, it seems, was displeased at the death of Æsculapius, *whom the goddess Coronis brought forth at Lacerea.* Now in this term Lacerea there is an apparent allusion to that *rent* or *opening*, through which this person is said to have come indirectly to light. Lacerea is probably an ancient Pelasgic term, of the same purport as λαχις, a *rent*, *opening*, or *fissure*: λαχις χθονος, χασμα χθονος. Hesych. *When the word lachis is applied to the earth, it denotes a*

[n] Apollon. Rhod. l. iv. v. 616.

chasm

chasm or rupture. Analogous to this, is the term *lacero*, among the Romans, which signifies *to tear:* and *lacer, any thing torn.*

Hic *lacer* admissos terruit Hector equos.

By lacer is meant *laceratus*, a person *wounded* and *torn*. I am sensible that the Greek words above, between which I have formed an analogy, are not expressed precisely in the same manner. But this amounts to little: for the same difference is to be found between other words, which have a like relation; particularly between two, which are much to the present purpose. These are λαχαινω, and λακκος. Λαχαινω signifies *to dig*, or *break up* the ground, and λακκος, a *trench*, or ground so *broken up*. These bear a close analogy with the term Lacerea. There were more places than one of this name, so called in memory of this exit of Æsculapius, or at least of the person figured under that character. For there were many cities and some regions in Greece, as well as in

other parts of the world, whoſe names were given in order to record the circumſtances of this hiſtory. And there were rites inſtituted, by which it was ſtill farther commemorated. Inſtances to this purpoſe may be found in the names of Lariſſa, Argos, Arene, Arcady, Bœotia, Corone, Coronea, Theba, Pyrrha, Iolchus.— Among theſe we may reckon [o] Lacerea, which is ſaid by Stephanus to have been in Magneſia, where the hiſtory, both of the Argo, and of Deucalion were particularly commemorated. He adds farther, that Hellanicus treated of it in his hiſtory of Deucalion, and that it was alſo called Hermion, and Ἑρμιονη—Herm-Ione. There is another circumſtance remarkable in this ſecond birth of Æſculapius, when he came out of Coronis; that he was not produced in a ſheltered valley, nor amidſt groves and fountains, as they fabled of other deities: but επι προχοης αμυροιο, *upon a ſhore or beach:* or rather upon a collection of *ooze and mud.* Αμυρος καθυγρος τοπος. Heſych.

[o] See Stephanus Λακερεια.

By amyrus is signified a place of a damp and marshy nature: and by προχοη is intimated a collection of such moist and oozy matter, as places of this sort abound with, especially after a great inundation. I go no farther, than to mention historical facts: the sagacious reader will make proper inferences.

Of some particular Temples erected for his Worship: and of the Deity MILIDATH.

AT Pergamus he had a [p] temple, which is represented as very splendid; and there was another at Lecte in Caria, where he was worshipped jointly with Venus [q] αναδυομενη, *rising from the waves.* He was held in particular honour by the people of Epidaurus; where stood a temple built [r] Ασκληπιω, και Απολλωνι Αιγυπτιοις—*to the*

[p] Lucian Icaro Menippus. vol. ii. p. 295.
[q] Strabo. l. xiv. p. 971.
[r] Pausan. l. ii. p. 174.

Æsculapius

Æſculapius and Apollo of Egypt. At Cenchreæ near Corinth he was worſhipped jointly with [s] Iſis. From hence, I think, we may perceive, from what part of the world his rites and hiſtory were imported; and be aſſured that they came from Egypt. From his being twice born, and ſuſtaining two characters, both as old and young, he was accordingly at times repreſented with a beard, γενεια εχων, as at [t] Delphi: at other times αγαλμα ȣκ εχον γενειον, he had *a ſtatue without a beard*; as at [u] Sicyon. At the former place he was worſhipped under the ſignificant title of Αρχαγετης, [w] Archagetes. There is a temple not to be omitted, which the Cretans dedicated to him at a place called Lebena, [x] Εν τῃ Λεϐηνῃ των Κρητων εϛιν Ασκληπειον. Now by Lebena is ſignified (לבן) *the moon*; not the planet in the heavens; but the myſtick moon, whoſe

[s] Pauſ. l. ii. p. 114.
[t] Ibid. l. x. p. 879.
[u] Ibid. l. ii. p. 141.
[w] Ibid. l. x. p. 879.
[x] Ibid. l. ii. p. 172.

hiſtory

history was here recorded. Mount Lebanon was denominated from the ſame object; as we may learn from the temple of Venus [y] Architis, which ſtood there, and from the rites obſerved. For here the death of Adonis, like that of Oſiris, was commemorated with tears; and his return to life with joy and [z] exultation. Other rites of the ſame nature were obſerved in Crete; where this lunar deity, under a different, but more ſignificant denomination, Minoüs, was deſcribed, as returning to life, and renewing his youth. Min and (Μην) Men, ſignified the moon: and the name given him of Minous, was a compound of Min and Noüs. The hiſtory is to be found in Claudian.

> [a] Cretaque, ſi vere narratur fabula, vidit
> Minoum rupto puerum prodire ſepulchro.

Minoüs, or Men—Noüs is the ſame perſon

[y] Macrob. l. i. c. xxi.
[z] Lucian de Syriâ Deâ. vol. ii. p. 878.
[a] Claudian de Bello Getico. v. 442.

as

as Æsculapius Archagetes, and Ασκληπιδος παις: and his history is the same. The purport of the above description is, that Men-Noüs, after he had been in a state of death, and entombed, as we may infer, in Lebena; at last burst his cearments, and came out in a state of childhood. The poet adds,

> Quem senior vates avium clangore repertum
> Gramine restituit: miræ tam munere sortis
> Dulcia mella necem, vitam dedit horridus anguis.

This was undoubtedly taken from an hieroglyphical representation of a very ancient tradition: in which were described birds and bees, together with the emblematical serpent. Providence also, under the figure of an aged person, was described as receiving Min-Noüs, restored to life, and childhood, and reclining him upon the ground. As to the serpent, we know it to have been the emblem of life renewed, and

and bees have a continual place in theſe allegorical deſcriptions. They nouriſhed Jupiter in his childhood, they fed Daphnis. They alſo preſerved Cometes, when he was in a ſtate of confinement.

[b] Και τυ κατεκλασθης ες λαρνακα, και τυ μελισσαν
Κηρια φερϐομενος ἐτος ὡριον εξετελεσσας.

You was moreover ſhut up in an ark, and ſurvived a [c] long ſeaſon upon the honey afforded by bees. It may be worth while to inquire into the origin of this notion. It is to be obſerved, that there was an oriental deity mentioned by [d] Herodotus and others, under the name of Mylitta, which Selden ſays, was the [e] Moon, or Venus. Of the two it was more properly the Moon. According to Scaliger [f], it was

b Theocritus. Idyl. vii. v. 84.

c Ετος ὡριον. Some make it two months, ſome three, ſome a year.

d Καλεȣσι δε Ασσυριοι την Αφροδιτην Μυλιττα. Herodot. l. i. c. cxxxi. p. 66. & c. cxcix. p. 95.

e De Diis Syris. p. 174.

f See Selden above.

taken from a Chaldaic term Mylidath, which signified γενετειρα, *or parent.* Both [g] Vossius and [h] Bochart take notice of it, and think it relates to *birth* and *delivery*: and that as a deity it is no more than Lucina, and Ilithyia. Selden also shews that it was the same as [i] Mithra of the Persians, which they esteemed the moon upon its increase; and, like Demeter, the mother of the world. It is very certain that Mylidath or Mylitta was supposed to be that being, by whom all things were nursed, and through whom the whole world was [k] restored. She was represented as the moon: but, as I have repeatedly said, not the luminary in the heavens; for what one of these attributes can be made to agree with her history or appearance?

[g] Vossius de Idololat. v. i. l. ii. p. 413. Melittam—puta Lunam.

[h] Bochart Hierozoic. Pars prior. l. ii. c. xxx. p. 292. Lucina et Ilithyia Pars poster. l. iii. c. xi. p. 408.

[i] Lunam nascentem. Selden de Diis Syris. p. 175. and p. 180.

[k] Μητερα την Σεληνην τε κοσμε καλεσι. *The Egyptians denominate the moon the mother of the world.* Plutarch. Isis et Osiris. p. 386.

No,

No, it was the myſtical hieroglyphical moon, [l] Μαια θεων, τροφη παντων, χρονȣ μητηρ, κοσμȣ μητηρ, ταυροκερως, *the foſter mother of the gods, the nurſe of all things, the parent of time, the mother of the world,* who was repreſented as a creſcent, and with *the budding horns of a ſteer.* She was the ſame as nocturnal Venus.

[m] Νυξ γενεσις παντων, ἣν και Κυπριν καλεσωμεν, ſo eſteemed as having a relation to *that ſtate of darkneſs, out of which all things proceeded.*

This Mylitta was worſhipped in Crete, and her prieſteſſes were reported to have nurſed Jupiter in his ſtate of childhood. But the Grecians expreſſed the original Milidath, not only Mylitta, but Μελιττα, and [n] Μελισσα, Melitta, or Meliſſa; and

l So denominated in the Orphic Hymns.

m Orphic Hymn. ii.

n Meliſſa, a Cretan princeſs, is ſaid to have nurſed Jupiter. Columella. l. ix. c. ii. p. 389.

Meliſſa and Amalthea, according to Didymus, fed him with goat's milk and honey.

the prieſteſſes were ſtyled Meliſſæ, which unfortunately ſignified *bees*. Hence it came, that theſe inſects were introduced into their hieroglyphicks: and thoſe perſons, to whom the Meliſſæ were by the mythologiſts aſſigned as attendants, were ſuppoſed to have been nurſed by bees, and fed with honey. Upon this account, we find it ſaid above of Cometas, that he was nouriſhed in this manner.

In like manner they are mentioned as nouriſhing Jupiter.

Dictæo Cæli Regem pavere ſub antro.

They fed the great regent of heaven during his infancy in the Dictæan cave. His life by theſe means was preſerved; but of Men-Noüs it is ſaid—dulcia mella necem dederunt—the ſame diet proved fatal. This diſagreement aroſe from the unavoidable ambiguity of all hieroglyphical repreſentation: to which may be added the uncertainty of oral tradition. The natives, I imagine, had an ancient tablet be-

fore

fore them, in which a perſon was reſtored to life, and from thence they conjectured that he muſt have been killed. He was reſtored by the ſerpent: they therefore concluded by way of contraſt, that his death was owing to the bees, and that he died of a ſurfeit of honey. Such are the miſconceptions, with which mythology has been obſcured: and miſtakes of this nature muſt neceſſarily have ariſen in a long courſe of years, becauſe all emblematical deſcriptions are liable to be interpreted, not only in a different, but in a contrary manner.

HIPPOLYTUS.

AS Æſculapius was the ſame as Protogonus, and as thoſe, who had been with him in his ſtate of confinement, were reſtored to their former ſituation, which was looked upon as a renewal of their lives: he was accordingly ſuppoſed to have the power, not only of preſerving life, but

even of reſtoring it. Hence they fabled of him, that he raiſed Hippolytus from the grave: who was on that account by the people of Latium worſhipped under the name of Virbius, as having been *twice a man*. Some ſay that it was not Hippolytus, who was raiſed from the dead, but [o] Pæan: others again, that it was [p] Hymenæus. But what does all this amount to, when the thin veil is withdrawn from the myſtery? The purport is merely this, that the ſcience of medicine revived in him: and that the rites of marriage were renewed. As to Hippolytus, he ſeems to have been the ſame as Æſculapius, if we conſider his name and hiſtory. For by Hippolytus is ſignified the *looſener* and *opener* of the Hippos or Hippa. And we have ſeen that Bacchus for the ſame reaſon was ſtyled Λυσιος, Luſius.—[q] Κλυθι Μακαρ,

[o] Damaſcius apud Photium. p. 1074.

[p] Apollodorus. l. iii. p. 172. the like hiſtory was given of Glaucus, the marine deity. It is ſaid of him, that he was the perſon reſtored by Æſculapius.

[q] Orphic Hymn. xlix. v. 2.

Βακχε.—

Βακχε—Πολυωνυμε, Λυσιε Δαιμον. *Hear me, O Bacchus, thou who art one of the Macares; who art repreſented under ſo many titles, and art the deity who ſetteth all things free.* Pan, *αρχαιοτατος, the moſt ancient of the gods*, was ſtyled [r] Λυτηριος, the great *Liberator*, who looſened, and gave freedom to all. Theſe epithets have all a reference to the ſame hiſtory, and perſon.

The Grecians ſuppoſed Hippolytus to have been a ſon of Theſeus at Athens; who flying from his father, was torn to pieces by his own horſes. Others ſay, that they were ſea-horſes, from which his death proceeded. He was worſhipped in different places; but particularly at [s] Træzen: where the people maintained, that he never was torn to pieces by horſes, and that the ſtory was a fable. And if they ſaid true, he could not have been an Athenian: for the Træzenians ſhewed the

[r] Pauſan. l. ii. p. 187.
[s] Ibid. p. 186.

houſe where he [t] dwelt, but did not, like the Athenians, pretend to ſhew his [u] tomb. In truth, he was neither of the one place, nor of the other: but antecedent to both. There was a ſtatue of Hippolytus near this temple at Træzen: but many affirmed, that it was deſigned for [w] Æſculapius. This ſhews that they did not perfectly know the true object of their worſhip: and that their traditions were very uncertain. Hard by, was the temple of Venus Speculatrix, and another of Pan, under the above-mentioned title, Λυτηριος, *the ſetter free.* We may perceive here an aſſemblage of emblematical memorials, all pointing to the ſame hiſtory and perſon.

The accounts given of him by the Grecians are ſo contradictory, and incon-

[t] Pauſan. l. ii. p. 187.

[u] The Athenians had a ταφος, which they gave out to have been his tomb. Pauſ. l. 1. p. 51.

It was near the temple of Æſculapius and Themis. Others maintained, that he was buried in Arcadia. See Lactant. de Falsâ Relig. l. i. c. ix. p. 39. and Cicero de Nat. Deor. l. iii. §. 57. in Cynoſuris ſepultum.

[w] Ibid. p. 187.

ſiſtent,

ſiſtent, that it is manifeſt, they were ignorant of his true character, and that he could not have been of that country. There is nothing in his hiſtory, as an Athenian, which could have entitled him to divine honours. A young prince of Athens flies in his chariot from an incenſed father, and is overturned and killed. What one article is here to induce people of other places to adopt him as a deity? I can perceive none. And as I have above ſaid, there is no more reaſon to ſuppoſe him a native of Athens, than of Træzen. Indeed, the people of the latter place ſeem to have the advantage: for they pretended to ſhew his houſe, intimating that he was an inhabitant of their city.

The notion about his being torn to pieces by horſes proceeded from the miſtakes of the Athenians, who did not underſtand their emblematical hiſtories; and from hence aroſe theſe fictions. The ſame may be obſerved in other parts of the world: and of this many inſtances may be afforded.

A crocodile was an emblem of preservation in floods and deluges: and, I imagine, that Achthoes, who is placed, as the first Heracleotick king, was represented with that animal. Hence it was given out, that he was killed by a [x] crocodile. In like manner Menes Lunaris, esteemed the first king of the country, was described with an Hippopotamus: and he was in consequence of it supposed to have been devoured by a [y] river-horse. Prometheus the wise, the guardian deity of Egypt, in the time of a fearful [z] deluge, was represented with an eagle, and sometimes a vulture: and with an emblematical heart. For Egypt was described hieroglyphically by an [a] heart: probably from the figure of the region Delta. And the river was called both the eagle, and the vulture: whence the country had the name of

[x] Ὑπο κροκοδειλȣ διεφθαρη. Syncellus. p. 59, 60. Euseb. Chron. p. 15.

[y] Ὑπο Ἱπποποταμȣ διεφθαρη. Syncellus. p. 54. Ὑπο Ἱπποποταμȣ ἡρπαθε. Euseb. Chron. p. 14.

[z] Μαλιϛα τȣτο το μερος, ȣ̔ Προμηθευς ειχε την επιμελειαν. Diodor. Sic. l. 1. p. 16.

[a] Horapollo. l. i. c. 22.

5 Aetia,

[b] Aetia, and Ai-guptus, as well as Ποταμιτις, all from the ſtream. Theſe circumſtances were miſapplied by the [c] poets and mythologiſts, as Diodorus Siculus confeſſes. In conſequence of this, Prometheus was deſcribed with an [d] eagle, or vulture, preying upon his vitals.

CONCLUSION.

FROM the premiſes above afforded we may perceive, what ſtrange contradictions ariſe in the firſt hiſtories of the world, if we ſuppoſe the ſame ſcience to

[b] Εκληθη και Αετια, Stephanus.

Δια το γενομενον εκρηγμα φασι Αετον ονομασθηναι. Δια δε την οξυτητα και την βιαν.—Τον ποταμον Αετον ονομασθηναι. Diod. Sic. l. i. p. 16, 17.

Αι-γυπτ, ſignifies the land of the vulture.

[c] L. i. p. 17.

[d] Aquilam appoſuit, quæ cor ejus exeſſet. Hyginus Fab. l. v. c. i. p. 252. Αιετον φερβε. Apollon. Rhod. l. ii. v. 1254.

Some make the bird a vulture, preying upon his liver—roſtroque immanis vultur adunco immortale jecur tundens, &c. Virgil. l. vi.

have

have originated in persons so various: and if a circumstance which is peculiar, and should be limited to one only, is attributed to many. The only and true way to remedy these anomalies, is to refer the whole to one general benefactor; call him either Sydyc, *the just*, or Protogonus, or Agathodæmon, or Osiris. The title is of little consequence. Such an one did exist; to whom a too grateful posterity referred all science, and every beneficial art: as they were thought to commence from him. Among these was the science of physick, which was of the greatest repute in Egypt: there being scarcely a family of consequence which had not its physician. Παντα δε ιητρων εςι πλεα. *All parts of Egypt*, says * Herodotus, *swarm with people of this profession.*

It is plain, I think, from what has preceded, that there had been of old, a person reverenced in Egypt for different attributes, and under a variety of deno-

* Herodotus. l. ii. c. lxxxiv. p. 141.

minations;

minations; and theſe were repreſented by as different hieroglyphicks. But theſe emblems and theſe titles produced at laſt as many diſtinct deities; and as ſuch they were borrowed and adopted by the Grecians: but, I believe, whoever will examine deeply and impartially, will find, that moſt of the principal deities may be reduced to one. The Apis of Heliopolis, the Mnevis of Memphis, Pan of Mendes, Anubis of Cunopolis, Bacchus, who planted the vine, Oſiris, who planted the ſame, Thoth, of whom it is ſaid, that he firſt gathered the fruit of it; all theſe, and many more, will be found to be one and the ſame perſon.

ARTICLE

ARTICLE II.

A Caſe of a Gangrene, after Caſtration, ſucceſsfully treated, by giving Alkalis and Acids ſeparately: by EDWARD LUTTRELL, *Surgeon at Tunbridge; communicated by* NATHANIEL HULME, M. D. F. M. S. *Phyſician to the* CHARTER-HOUSE; *and Phyſician extraordinary to the* GENERAL-DISPENSARY.

Read at the SOCIETY, April 20, 1779.

I. L. aged forty-three, laboured under an indurated and greatly diſeaſed teſticle, which was judged to proceed from a venereal cauſe, having frequently had the *Lues Venerea*.

The *teſtis* was conſiderably enlarged, but without any great pain, except from its weight. As caſtration was thought to be the only means of eradicating the diſeaſe completely,

completely, it was propoſed to him, and he readily conſented.

For about a fortnight after the operation, the wound went on pretty favourably; it was dreſſed with a digeſtive ointment, and at the ſame time he took mercurials, with a decoction of *ſarſaparilla*, for the venereal affection, which was ſuppoſed ſtill to exiſt in his habit. But between the ſecond and third week, the wound began to have an unfavourable appearance; namely, to enlarge, and be accompanied with frequent hæmorrhages from every part of the ſore, and the diſcharge inſtead of being laudable *pus*, was a thin and ſtrongly fœtid matter, mixed with blood in a coagulated form, lying upon the ſurface of the wound; and although theſe clots of blood were removed twice a day, yet they again preſented themſelves at every dreſſing. The ill-formed diſcharge and bloody appearance increaſed daily, and the lips of the ſore evidently put on a gangrenous appearance. At the commencement of theſe bad ſymptoms,

toms, the mercurials and decoction of *ſarſaparilla* were laid aſide, and in their ſtead he took peruvian bark with elixir of vitriol every three hours. His dreſſings were of the warm kind, with *ſpir. vin.* and *ol. terebinth.* varied as was found neceſſary; but neither theſe applications, nor the internal remedies, which were continued five or ſix days, had any effect in ſtopping the progreſs of the diſeaſe: for he now began to ſink apace, the mortification gained ground, he was extremely weak and emaciated, had no appetite, his eyes were languid, and his pulſe frequent and ſmall. Under theſe diſcouraging circumſtances, it was agreed upon to join with the bark an alkali and an acid, and to give them ſeparately, ſoon after each other, ſo as to cauſe an extrication of the fixed air, while in the ſtomach, as recommended by Dr. Hulme, in a late treatiſe *. With this view three large ſpoonfuls of the follow-

* A ſafe and eaſy Remedy, propoſed for the Relief of the Stone and Gravel, the Scurvy, Gout, &c. Lond. 1778.

ing

ing mixture, were given immediately after each other, every three hours:

℞ *Decoct. cort. Peru.* ℥ *viii.*
Spir. ſal. ammon. ʒ *iſs. ut fiat Miſtur.*
℞ *Decoct. cort. Peru.* ℥ *viſs.*
Pulv. cort. Peru. ʒ *ij.*
Acet. diſtillat. ℥ *iſs. ut fiat Miſtur.*

He began to take theſe medicines on Thurſday the 11th of March, continuing them day and night. In twenty-four hours, the wound put on a better appearance, the *fœtor* was abated, there was leſs diſcharge of blood, and he paſſed a tolerably good night; and by the 13th, the third day from this courſe, the ſore had an exceeding favourable aſpect, the ſlough threw off, florid granulations appeared, with well-digeſted *pus*, and little or no *fœtor* remained, which before was almoſt intolerable; his pulſe became ſtronger and leſs frequent, his ſkin moiſt, but he complained of a little heat. The former dreſſings were now laid aſide, dry lint, and over that *cerat. epulot.* were made uſe of,

 and

and his medicines were ordered to be continued. On the 14th, both his health and the wound continued mending, his appetite returned, and he requeſted to have a greater allowance of food, which was granted him. After this time he continued to recover daily, and perſevered in the uſe of the above medicines for about three weeks, until the wound was entirely filled up with granulations, and in a great part cicatrized, when they were omitted, as it was thought no longer neceſſary to continue the uſe of them. Upon leaving them off, a ſlight *diarrhœa* came on, which was removed by a little rhubarb and *confect. Damocrat.* The wound at preſent wants a little of being perfectly cicatrized, but otherwiſe the patient is in a good ſtate of health.

ARTICLE

ARTICLE III.

Observations upon the Cause and Cure of the Tetanus: In a Letter from BENJAMIN RUSH, M.D. *Professor of Chemistry in the University of* PHILADELPHIA, *and Corresponding Member of the* MEDICAL SOCIETY *of* LONDON, *to* J. C. LETTSOM, M. D. *Fellow of the* ROYAL, ANTIQUARY, *and* MEDICAL SOCIETIES *of* LONDON, *and Physician extraordinary to the* CITY *of* LONDON LYING-IN-HOSPITAL; GENERAL, *and* FINSBURY DISPENSARIES.

Read February 10, 1786.

SIR,

DURING my attendance upon the military hospitals in the course of the late war, I met with several cases of the *Tetanus*. I had frequently met with this disorder in private practice, and am sorry to say, that I never succeeded with

the ordinary remedy of *opium* in any one caſe that came under my care: I found it equally ineffectual in the army. Baffled in my expectations from a remedy that had been ſo much celebrated, I began to inveſtigate more particularly the nature of the diſorder: I found it to be a diſeaſe of warm climates, and warm ſeaſons. This led me to aſcribe it to relaxation: I reſolved to attempt the cure of it by a ſet of medicines, in ſome meaſure the oppoſites of moſt of the medicines that had been employed in that diſorder. Soon after I adopted this reſolution, I was called to viſit colonel John Stone, who was wounded through the foot at the battle of German-Town, on the 4th of October 1777. He was in the third day of a *Tetanus:* his ſpaſms were violent, and his pains ſo exquiſite that his cries were heard near a hundred yards from his quarters; his head was thrown a little backwards, and his jaw began to be ſtiff and contracted. He was under the care of a ſkilful regimental ſurgeon, who was pouring down *opium* in large quantities without effect. Duty and

friendſhip

friendſhip both led me to do my utmoſt to ſave the life of this valuable officer. I immediately diſmiſſed the *opium*, and gave him large quantities of bark and wine, to the amount of two or three ounces of the former, and from a bottle to three pints of the latter in a day; in a few hours I was delighted with their effects: his ſpaſms and pains were leſs frequent and violent, and he ſlept for ſeveral hours, which he had not done for ſeveral days and nights before. With the ſame indication in view, I applied a bliſter between his ſhoulders, and rubbed in two or three ounces of *mercurial ointment* upon the outſide of his throat. He continued to mend gradually under the operation of theſe medicines, ſo that in ten days he was out of danger; although the ſpaſm continued in his wounded foot for ſeveral weeks afterwards.

In the ſummer of the year 1782, I was called to viſit a ſervant girl of Mr. Alexander Todd, merchant of this city, who had brought on a *Tetanus* by ſleeping in

the evening on a damp brick pavement, after a day in which the Mercury in Farenheit's thermometer had ſtood at near 90 deg. Her caſe was nearly as violent and alarming as the one I have deſcribed. I treated her in the ſame manner, and with the ſame ſucceſs. To the above-named medicines, I added only the oil of amber, which ſhe took in large doſes, after I ſuſpected the tonic powers of the bark and wine began to loſe their effects. The good effects of the oil were very obvious. She recovered gradually, and has continued ever ſince in good health.

In the ſummer of the ſame year, I was called to Peter Leſlie, a Joiner, who had run a nail into his foot. I found him the day afterwards in extreme pain, with ſmall convulſions, and now and then a twinge in his jaw: the wound in his foot was without ſwelling or inflammation. I dilated the wound, and filled it with lint moiſtened with ſpirit of turpentine; this in a little while produced a good deal of pain, and a great inflammation in his foot. While I

was

was preparing to treat him in the manner I had treated the two former caſes, his pains and ſpaſms in his body ſuddenly left him, and in four and twenty hours after I ſaw him, he complained of nothing but of the pain and ſwelling in his foot, which continued for ſeveral weeks, and did not leave him till it ended in a ſuppuration.

From the hiſtory of theſe three caſes, I beg leave to make the following remarks:

I. That the prediſpoſition to the *Tetanus* depends upon relaxation; this relaxation is generally produced by heat; but exceſſive labour, watchings, marches, or fatigue from any cauſe, all produce it likewiſe; and hence we find it more frequent from wounds received in battles, than from ſimilar wounds received in any other way. Theſe wounds more certainly produce the *Tetanus*, if they have been preceded for ſome time with warm weather. Dr. Schoepft, the phyſician general of the Anſpach troops, that ſerved at the ſiege of New-York, in the year 1781, informed me of

a ſingular fact upon this ſubject: upon converſing with the French ſurgeons after the capitulation, he was informed by them, that the troops who arrived juſt before the ſiege from the Weſt-Indies with the Count de Graſſe, were the only troops belonging to their nation that ſuffered from the *Tetanus*. There was not a ſingle inſtance of that diſorder among the troops who had ſpent a winter in Rhode-Iſland.

II. As the *Tetanus* ſeems to be occaſioned by relaxation, the medicines indicated to cure it are ſuch only as are calculated to remove this relaxation, and reſtore a tone to the ſyſtem; the bark and wine appear to act in this way. The operation of the bliſters is of a more complicated nature; that they are ſedative and antiſpaſmodic in fevers, is univerſally acknowledged; but in the peculiar ſtate of irritability which occurs in the *Tetanus*, perhaps their effects are more ſimply *ſtimulating*. But I will go one ſtep further. In order to cure this diſorder, it is neceſſary not only to produce an ordinary tone

in

in the ſyſtem, but ſomething like the inflammatory *diatheſis*; the abſence of this *diatheſis* is taken notice of by all authors, particularly by Dr. Cullen[f]. *Mercury* appears to act only by promoting this *diatheſis*; hence it never does any ſervice, unleſs it be given time enough to produce a ſalivation. The irritation and inflammation produced in the mouth and throat, ſeldom fail to produce the inflammatory *diatheſis*; as blood drawn in a ſalivation has repeatedly ſhewn. I apprehend that the oil of amber acts as a ſtimulant chiefly in this diſorder. I have heard of a *Tetanus* being cured in the iſland of Granada by large doſes of muſtard. Dr. Wright, lately of the iſland of Jamaica, relates, in the ſixth volume of the London Medical Eſſays, ſeveral remarkable caſes of the *Tetanus* being cured by the cold bath. Both theſe remedies certainly act as ſtimulants and tonics. By reaſoning *a priori*, I conceive that electrity would be found to be an equally powerful remedy in this diſorder.

[f] Firſt Lines, vol. iii.

III. As general inflammatory *diathesis* disposes to topical inflammation, so topical inflammation disposes to general inflammatory *diathesis*. Wounds upon this account are less apt to inflame in summer than in winter. In the *Tetanus*, I have uniformly observed an absence of all inflammation in the wound or injuries that produce it. A splinter under the nail produces no convulsions, if pain, inflammation, and suppuration follow the accident: it is by exciting pain and inflammation, I apprehend, that the spirit of turpentine acts in all wounds and punctures of nervous and tendinous parts. I have never known a single instance of *Tetanus* where this remedy has been applied in time. It was to excite an inflammation in the foot of Mr. Leslie that I dilated the wound, and filled it with the spirit of turpentine; I was not surprised at its good effects in his case, for I was prepared to expect them.

I find a remarkable case related in Dr. William Monro's *Thesis*, published in Edinburgh

Edinburgh in the year 1783, of a black girl, who had a *Tetanus* from running a nail in her foot, being perfectly cured by deep and extenſive inciſions made in the wounded part by Dr. John Bell, of the Iſland of Granada. It is by producing inflammation in a particular part and tone in the whole ſyſtem. I apprehend that the amputation of a wounded limb ſometimes cures a *Tetanus*. And it is becauſe the degrees of both are too inconſiderable to oppoſe the violence of the ſpaſms in the advanced ſtages of the *Tetanus*, that amputation often fails of ſucceſs.

I have been informed by a Phyſician who reſided ſome time at St. Croix, that the Negroes on that iſland always apply a plaſter made of equal parts of ſalt and tallow, to their freſh wounds, in order to prevent a locked jaw. The ſalt always produces ſome degree of inflammation.

If the facts that have been ſtated are true, and the inferences that have been drawn from them are juſt, how ſhall we account

account for the action of *opium* in curing this diſorder? I do not deny its good effects in many caſes, but I believe it has failed in four caſes out of five, in the hands of moſt practitioners. It is remarkable that it ſucceeds only where it is given in large doſes. In theſe caſes I would ſuppoſe that its ſedative powers are loſt in its ſtimulating. It is upon a footing therefore, in one reſpect, with the ſtimulating medicines that have been mentioned; but from its being combined with a ſedative quality, it is probably inferior to moſt of them. I am the more inclined to adopt this opinion from an account I once received from Dr. Robert, of the iſland of Dominique, who informed me that after having cured a Negro man of a *Tetanus*, he was afterwards ſeized with a diſorder in his ſtomach, of which he died in a few days. Upon opening him he found his ſtomach inflamed and mortified. I do not forbid the uſe of *opium* altogether in this diſorder. I think *ſmall* doſes of it may be given to eaſe pain, as in other *ſpaſmodic* diſorders, but as its qualities are com-

plicated, and its efficacy doubtful, I think it ought to yield to more ſimple and more powerful remedies.

To this account of the *Tetanus*, I beg leave to ſubjoin a few words upon a diſorder commonly called the *Jaw-fall* in infants, which is nothing but a *Tetanus.* I have met with three caſes of it in this city, all of which proved fatal. The ſtage of the diſorder in which I was called, and the age and weakneſs of the infants, all forbad me to attempt any thing for their relief. I have introduced the ſubject of this diſorder in children only for the ſake of mentioning a fact communicated to me by the late Dr. Cadwallader Evans, of this city. This gentleman practiſed phyſic for ſeveral years in Jamaica, where he had frequent opportunities of ſeeing the *Tetanus* in the black children. He found it in every caſe to be incurable. He ſuppoſed it to be occaſioned by the retention of the *meconium* in the bowels. This led him invariably to purge every child that was born upon the eſtates committed to his care.

care. After he adopted this practice, he never met with a ſingle inſtance of the *Tetanus* among children.

Perhaps it may tend to enlarge our ideas of the *Tetanus*, and to promote a ſpirit of inquiry and experiment, to add that this diſorder is not confined to the human ſpecies. I have known ſeveral inſtances of it in horſes, from nails running in their feet, and from other accidents. It is attended with a rigidity in the muſcles of the neck, a ſtiffneſs of the limbs, and ſuch a contraction in the jaw as to prevent their eating. It is generally fatal. In two caſes (the one in my own horſe) I had the pleaſure of ſeeing the diſeaſe perfectly cured by applying a potential cauſtic to the neck under the mane, by large doſes of the oil of amber, and by plunging one of them into the river, and throwing buckets of cold water upon the other.

With great reſpect I am, ſir, your much obliged friend, and humble ſervant,

Philadelphia,
July 16, 1785.

BENJ. RUSH.

ARTICLE

ARTICLE IV.

Cafes of Palpitation of the Heart, attended with peculiar Symptoms: By J. C. LETTSOM, M. D. &c.

Read March 20, 1786.

CASE I.

T. S. a delicate lively boy fix years old, firft had my affiftance on the 3d of January 1786. I was informed that he had laboured under a rheumatifm with fever for about five weeks paft; but that, although his pains, which had affected his body, as well as the limbs, had fubfided, a cough had come on and increafed, with fome degree of difficulty of breathing.

When I faw him, the pulfe was not ftrong, but thready and fmall, beating 126 ftrokes in a minute, with occafional intermiffions; a *Palpitation of the Heart* was

fo

ſo conſpicuous, as to be immediately diſcernible acroſs a large room; and upon laying one hand on the thorax, and the other on the back, the vibrations of the ſtrokes were ſo violent, as to ſhake the whole body, and to give an impreſſion on the hands as if the partition between them and the pulſation was very thin. The breathing was ſhort and ſometimes laborious; and particularly about every four or five minutes, when a more deep and full inſpiration was taken, aſſiſted with a writhing or ſerpentine direction of the body, as if deſigned to admit a more copious inſpiration. He was able to lie in any poſition of the body, without increaſed *dyſpnœa*; the cough was ſhort and quick, but not very violent; the countenance delicate and pale, and the body emaciated, excepting the ancles, which acquired a little tumeſcence towards evening: he had intervals, and ſometimes days, that he was ſo well as to enjoy his books and play-things with chearfulneſs. His appetite was good; but as he was a tractable child, and his parents extremely prudent, the vegetable nutriment

nutriment which was enjoined, was ſtrictly purſued for ſeveral weeks.

I ordered him as a medicine, the emulſion of almonds with nitre, and Hoffmann's anodyne liquor; and to have five ounces of blood taken from the arm.—This was on the 4th of January, and the medicine was continued till the 9th, when the bleeding was again repeated. As an addition to the emulſion, I ordered a grain of extract of hemlock, and half a drachm of *ſyrupus e meconio*, to be taken three times a day.

After each bleeding the ſymptoms were much milder, but they continued in degree; the pulſe was never ſlower than 110, rarely indeed under 120. With this little reſpite, he gradually became ſo weak, that I was deterred from the repetition of *venæſection*.

Towards the end of January, the legs became more *anaſarcous*, and debility gradually undermined the frame. To repeat

peat every prescription, wherein so little was done by medicine, would be useless. A purgative of *calomel* was occasionally given, which always afforded some relief for a day or two afterwards. The nights were rendered easy by such a quantity of *syrupus e meconio* as procured rest.—When the weather admitted, as some days in January and February were unusually warm, he was taken into the air, and slept in the country-house of the family; he had asses milk every morning, and was guarded with every attention, as to the weather, as well as diet, that affection could dictate towards a promising son.

In the beginning of March a more general *anasarca* ensued, with a slight fluctuation of water in the *abdomen*, though he still kept up some part of the day with the family; but from this period weakness more rapidly ensued, and he was obliged to keep his bed some days before he died, which happened on the 10th of March. Two days preceding this event, a quantity of water passed off by the urinary passages,

and the tenſion of the abdomen abated; but in leſs than twelve hours, a ſimilar fulneſs took place.

On the 12th of March the body was opened by the Surgeons Field and Sherlock, when I alſo attended. On removing the integuments, the whole ſite of the *abdominal viſcera* was natural, as in a ſound healthy ſtate, excepting in the appearance of the *omentum*, which was almoſt without fat; the liver, gall bladder, ſpleen, and other *viſcera*, free from any apparent diſeaſe: about a pint of water was effuſed into the *abdomen*.

On opening the *thorax*, which was more elevated and enlarged on the left ſide, a ſimilar effuſion of water, of nearly half the quantity, was diſcovered; the *pericardium*, at its firſt expoſure to the eye, appeared conſiderably enlarged, and afforded a ſuſpicion of water likewiſe within its cavity; and upon dividing it, there appeared to be about an ounce of fluid contained in it.

It was the heart itſelf that was ſo much enlarged, appearing of twice the natural magnitude; for in cutting open the right ventricle, at leaſt five ounces of blood were diſcharged from it: and on a ſimilar diviſion of the left ventricle, about two ounces more; but the right ventricle, although ſo conſiderably enlarged, appeared to poſſeſs its natural conſiſtence.

The left *lobe* of the lungs adhered ſtrongly to the parts in vicinity; laterally to the ribs; inferiorly to the *diaphragm*; poſteriorly to the *pleura*; as well as to the *pericardium* by the *mediaſtinum*; and on the ſurface under the *ſternum* there appeared a ſlight *extravaſation* of blood: in cutting into the ſubſtance of the left lung there was no ſign of diſeaſe, except here and there a ſmall ſpot of *extravaſated* blood, but nothing that in the leaſt could interfere with reſpiration.

The external ſurface of the right *lobe* afforded very extenſive appearances of *extravaſation*, but without any adheſion to

the neighbouring parts, and in cutting into, its ſubſtance, it was found generally diſeaſed from inflammation; it cut like a firm ſolid ſubſtance, but it was not in a *ſcirrhous* ſtate in the leaſt; nor were there *tubercles* in any part of its ſubſtance or coat: the colour was nearly black, the air and blood veſſels almoſt obliterated; and portions of it cut out and thrown into water, ſuddenly ſunk. In no part of theſe *viſcera* was any ſuppuration or *pus* obſervable; and for the moſt part appeared juſt as ſolid as liver, and of the ſame aſpect.

It has been obſerved, that excluſive of the enlargement of the *ventricles*, no morbid affection appeared in their coats; and the *arteria pulmonalis*, though enlarged at its trunk, had no diſeaſe; but the ramifications branching from it, were ſoon obliterated in the dark-coloured, heavy portions of the right *pulmonary lobe*.

The immediate cauſe of death muſt appear obvious from this ſketch of the

diſeaſed parts; the blood thrown from the right ventricle into the *arteria pulmonalis*, being greatly obſtructed by the diſeaſed ſtate of the right *lobe*, a regurgitation of the blood into the ventricle muſt enſue; and under ſuch an immediate contingence the patient probably expired, as the ventricle and *arteria pulmonalis* were found loaded with about five ounces of blood, part coagulated, and nearly as much fluid.

This obſtructed exit of blood, and regurgitation, might occaſion the enlargement of the right ventricle, and likewiſe that palpitation and laborious breathing which he endured for many weeks, and which gave ſome ſuſpicion of an *aneuriſm* near the heart.

Oppreſſed in breathing as he was, and with a ſenſe of load about the cheſt, he frequently gave writhing ſerpentine poſitions to his body, as has been remarked, which ſeemed at length involuntary, in order probably to overcome the impeded circulation

circulation of blood through the heart and large veſſels.

From all the different remedies employed during his illneſs, three only afforded ſome relief—occaſional bleedings, the anodyne of *ſyrupus e meconio,* and a purgative of *calomel.*

From the ſtate of the lungs, there is ſufficient reaſon to conclude that inflammation, firſt in the left *lobe* and *pleura,* and afterwards communicated to the right *lobe,* was the original diſeaſe; and how far bleeding, and the plan of treatment uſual under ſuch a ſtate, could it have been diſcovered, might have obviated the fatal termination, is not aſcertainable.

CASE II.

S. R——. a young lady, about eleven years of age, was, during the year 1776, much afflicted with darting pains

about the region of the ſtomach. In the ſpring of 1777, ſhe had a ſlight cough, and felt a conſiderable difficulty of breathing, accompanied with ſuch a *Palpitation of the Heart* as was diſcernible at a conſiderable diſtance; and upon laying the hand on the *ſternum*, it gave a ſenſation to the touch not eaſily deſcribed; ſomewhat like a fluid paſſing through a cylinder, in the central ſubſtance of which a ball had been infixed, againſt which the impulſe of the circulating fluid had been directed, and by it repelled with a vibratory motion along the cylinder: this vibration, as well as the *Palpitation of the Heart*, were diminiſhed upon holding the breath, but this undulating motion was more regular when the breathing was equally maintained, which was uſual when aſleep, and ſometimes ſo when awake in a reclined poſition: when this equal balance was once overcome, which was ſeveral times in an hour when out of bed, the patient would attempt a full and laborious inſpiration with a writhing ſerpentine flexure of the body, which again reſtored the

loſt

loſt balance; but in this effort the vibration was attended with a kind of double undulation, as if a convulſive, had immediately followed the natural action, of the cylinder. Upon motion, reſpiration became more difficult, and a ſenſe of ſuffocation ſometimes enſued; but throughout the whole diſeaſe there was no acute pain in the *thorax*, though ſometimes ſlight ſhooting pains in the pectoral muſcles were noticed; the principal pain complained of, was about the upper part of the *larynx*, and this continued throughout the diſeaſe almoſt invariably.

The pulſe was generally quick, ſometimes hard and thready, ſeldom beating under 130 ſtrokes in a minute; it often intermitted, eſpecially upon motion, when it alſo was attended with a fluttering irregularity: there was rarely any fever, at leaſt for days ſucceſſively ſhe was free from any; ſometimes an increaſed heat came on, with a fluſhed hectic appearance of the cheeks, but this was more apparent near the end, than in the recent ſtate of

the diſeaſe. The voice was ſhrill, haſty, and impetuous, as if from impatience in ſuffering, though ſhe applied it to no particular cauſe, but an inability to do otherwiſe.

The patient took *cicuta,* Hoffmann's anodyne, the Peruvian bark, and many other medicines, without any obvious benefit; a bliſter was applied to the breaſt, and long kept open; bleeding was tried, and as the blood was very ſizy, it was repeated; but temporary mitigation only reſulted.

In September the cough became more troubleſome, with a frothy expectoration, which ſhe deſcribed as ariſing from the *larynx* or ſuperior part of the *trachea*; where her pain was moſt perceptible, and now extended over the whole cheſt: ſhe grew daily and rapidly more and more emaciated, and ſhe expired on the 2d of October, 1777.

On the 4th of the ſame month the body

was

was opened by Mr. Headington, Surgeon, in Spitalfields, when I was likewiſe preſent.

The *pericardium* contained a conſiderable quantity of fluid, amounting to three ounces and a half; about the ſame quantity floated in the cavity of the *thorax:* both *lobes* of the lungs were ſet with ſeveral ſmall glandular *tubercles*, ſome of which were in a ſtate of ſuppuration; and on the right there was a ſlight adheſion to the *pleura.*

The *ventricles* of the heart were loaded with coagulated blood, as well as the aſcending *aorta*; and in tracing the courſe of this artery, which paſſes over the *trachea*, a tumor was diſcovered near the origin of the *aorta*, and ſituated immediately between it, and the *trachea*, in ſuch a manner as equally to preſs upon them.

This *tumor*, of the magnitude of a large walnut, ſuppoſed to be an enlarged *lymphatic gland*, was *ſteatomatous*, with a ſlight ſuppuration

ſuppuration on the ſurface in vicinity to the *trachea*, and the coats of the latter were become thinner on that ſide: the *artery* itſelf, though compreſſed on the ſide touching the *tumor*, was of a healthy texture. The *abdominal viſcera* were in general in a natural ſtate; even the *meſenteric* glands, were free from diſeaſe, as well as the liver and its appendages.

In exhibiting this view of the *thoracic viſcera*, the *hydrops pericardii*, the *pulmonary* ſuppurations, and the glandular *tumor*, might ſingly be conſidered as a ſufficient ſource of fatality. As the cough was very trivial till near the approach of death; it might be ſuggeſted, that the *pulmonary* affection was ſubſequent to the *tumor*; which was ſo ſituated as to obſtruct the free tranſit of blood through the *aorta*, and thus impeding the functions of the heart, firſt laid the foundation of the *hydrops pectoris*. The patient was upwards of twelve months indiſpoſed, a period of time ſhe could not have ſubſiſted under ſuch a degree of *hydrops*

pectoris:

pectoris: hence it might be inferred, that the *tumor* gave riſe to the other diſeaſes, and was the ſource of the fatal termination. Added to theſe conſiderations, the writhing ſerpentine flexure of the body, adopted by the patient, determine me to this opinion, as well as the large quantity of blood, found in the *ventricles*, which alone appeared to reſult from the mechanical preſſure of this hard body upon the *aorta*, producing congeſtion of blood in the heart, whilſt the deſcending *aorta* was found unuſually empty of this fluid.

Though the *larynx* and whole courſe of the *trachea* were not diſeaſed, yet the pain was generally referred to the ſuperior part of this tube; the cough might occaſion ſome irritation, but by no means equivalent to the ſufferings of the patient. If we reflect upon the condition of other parts of the body, wherein pains are perceptible at a diſtance from the exciting cauſe, we may riſk a conjecture in the preſent inſtance; thus a *calculus* in the *veſica urinaria*, gives a painful ſenſation

at

at the *glans penis*; and obſtructed *fæces* in the inteſtines occaſion pain at the *ſphincter ani*; in like manner a tumor preſſing on the *trachea*, may convey a ſenſe of pain at its termination in the *larynx*: if muſcular fibres reſemble other elaſtic bodies this conjecture is further eſtabliſhed; thus, in vibrating cords the force of impulſe will be ſtrongeſt at their fixed extremities.

In both the preceding caſes, I have particularly mentioned, the writhing ſerpentine directions of the body, which accompanied the *dyſpnœa*, and general ſymptoms of oppreſſed circulation; and from further inquiries, among medical gentlemen, who have been attentive to diſſections of uncommon diſeaſes, I am induced to think that theſe particular attitudes of the body, are the uſual concomitants of obſtruction in the blood veſſels of the heart, and of the larger veſſels immediately communicating with it.

This ſymptom has not hitherto been noticed as an attendant on the *angina*

pectoris.

pectoris. The difficulty of breathing upon motion; the lancinating pains about the *pectoral* mufcles and arms, and the intermitting pulfe, are the moft *pathognomonic* fymptoms of a difeafe fcarcely yet eftablifhed, although the moft accurate diffections have been made; but in all the cafes of obftructed blood near the heart, the periodical voluntary or involuntary attitudes of the body already defcribed, have been prominent features. I do not recollect to have feen that fenfe of fudden fuffocation ufual in the *angina pectoris,* and probably the very fymptom above mentioned tends to obviate it, by giving an impulfe to the action of the heart that overcomes the refiftance in the large veffels.

Fatal as thefe difeafes have hitherto been, I thought it would afford fome ufeful addition to our fcanty ftock of medical knowledge refpecting them, thus to make fome difcrimination in their leading fymptoms, which future experience may probably apply to elucidate facts beyond the reach of prefent inveftigation.

ARTICLE V.

Obſervations on Deafneſs, from Affections of the Euſtachian Tube: By JAMES SIMS, M. D. *Preſident of the* MEDICAL SOCIETY *of* LONDON, &c.

Read May 20, 1786.

THE tube which paſſes from the internal cavity of the ear beyond the *membrana tympani*, to the back part of the *fauces*, is called the *aqueduct* by ſome, but is more commonly known by the name of the *Euſtachian tube*, from its having been firſt accurately deſcribed by that excellent anatomiſt. Some writers, as Le Clerc and Haller, have ſuppoſed Alcmæon and Ariſtotle, acquainted with this tube, from their aſſerting that goats breathe through the ear. This aſſertion, however,

however, is given both by Pliny and Varro to Archelaus. But it appears to me that a knowledge of this *tube*, and even its uſes, may with much more reaſon be attributed to Hippocrates, what they have averred concerning goats being falſe; whereas, in his book *de locis in homine*, he ſays, that in ſuppurations of the ear, a ſponge dipped in a drying medicine is to be put into the external ear, and at the ſame time a purgative, by which he means ſtimulating, medicine is to be put into the noſe, ſo that the matter which before flowed into the ear may be carried into the noſe.

Many uſes have been aſcribed to this *tube*, yet I am apprehenſive one of the principal ones has not as yet been pointed out. From ſeveral circumſtances I am of opinion, that it conveys the ſound of our own voice to the organ of hearing, in the ſame manner as the *meatus auditorius externus* conveys to it all other ſounds whatever; on which account it is the principal regulator of our own voice. Had I not formed this opinion from a variety of facts,

facts, I should have been led to give it up on the authority of the celebrated Dr. Monro, of Edinburgh, who in his tenth chapter of the Physiology of Fishes, asserts, from what he thinks a conclusive experiment, that no distinct impression is transmitted through the *Eustachian tube*. As this is intended merely as a practical paper, I would not have mentioned my opinion here, if it had not served to illustrate some of the remarks which follow; and as I am venturing to dissent from one great physiologist, I hope I may be allowed to point out what I think an error in another, no less celebrated one, I mean Haller, who, § 5. c. iii. l. xv. of his *Elementa Physiologiæ*, says, that in inspiration a torrent of air enters the *Eustachian tube*, and presses the membrane of the *tympanum* strongly outward: that this happens in expiration, especially if the mouth or nose be closed, or the expiration be sudden and violent, as in sneezing, may be easily demonstrated; but that it should happen in inspiration, is contrary to the laws of mechanics.

Be

Be theſe matters, however, as they may, no one I believe at this time doubts that Deafneſs enſues when the *Euſtachian tube* is obſtructed, as well as when the *meatus auditorius externus* is ſtopped up. Theſe two ſpecies of Deafneſs being, perhaps, almoſt the only curable ones, are therefore moſt worthy of our attention. The manner of treating each, being entirely different from the other, it becomes alſo of great importance to find out marks by which we may diſtinguiſh them. To point out the ſymptoms by which we may know the *Euſtachian tube* to be the ſeat of the diſeaſe, and how to remedy it when ſeated there, ſhall be the ſubject of this paper.

Previous to any general deductions, I think it beſt to give a hiſtorical account of what I have obſerved from my firſt paying particular attention to this ſubject until the preſent time. In the ſummer of 1773, I was deſired to viſit a young gentleman in Fenchurch-Street, who from having taken cold, had been ſeized with Deafneſs about three weeks before. The diſorder was at

first attended with feverishness, and some degree of inflammation about the *tonsils*, for which he had been bled. The other symptoms of the case, such as an eruption upon his face of a leprous appearance, which afterwards yielded to the æthiopic pill, are not necessary to be related here; let it suffice to say, that on the morning before my first visit he had been perfectly restored to hearing, by a violent fit of sneezing, his ears giving a loud crack at the same time. That a stoppage of the *Eustachian tube* might occasion a Deafness, I did not doubt, from having frequently observed, both in myself and others, the hearing injured for a short time during colds, together with a noise in the ears, which usually went off on their giving a smart crack. But that this might be so permanent, as in the following case, and yet still be remediable, I must own did not fall within my conception; I shall therefore relate it circumstantially as given to me by the gentleman himself, the application of it seeming very important in medicine:

Mr.

Mr. Robert Stephens, a ſtudent of medicine, of a ſtrong make and about twenty-one years of age, on his return in the month of April, 1770, from Edinburgh to Ireland, embarked at Greenock in a ſmall veſſel, and as there were a great number of paſſengers, he ſuffered many inconveniences during the voyage, which proved very tedious. When at ſea, they were becalmed in ſuch a ſituation as rendered it equally inconvenient to turn back or proceed; making choice however of the latter, they endeavoured to haſten their arrival at Belfaſt, by towing the veſſel with the long boat. This employed them by turns for three days, and as many nights; during which time, Mr. Stephens was often violently heated and afterwards much expoſed to cold. Being an unexperienced ſailor, he neglected applying to ſpirits, their noſtrum in ſuch circumſtances, of which imprudence he began to find the effects before his departure from the veſſel, being ſeized with a very ſevere fit of the Rheumatiſm, which laſted many months. Eight or ten days after his arrival in Ire-

land, he was ſeized with an inflammation in the *tonſils* that almoſt threatened ſtrangulation; nothing could be ſwallowed but thin diluting liquors, even thick water-gruel not finding a paſſage downwards, without the moſt exquiſite pain, and the leaſt motion of the *glottis* in ſwallowing the *ſaliva* being attended with ſuch torture, that the remoteſt member of the body felt its effect. For three days it had the appearance of ſuppurating, but on the fourth it ſubſided ſo much, that he had recourſe to his uſual manner of life. Immediately after its abating, he perceived his hearing begin to decreaſe, with a prodigious noiſe in his ears, which continued for three weeks, until it brought him to ſuch a ſituation that he could not hear common converſation, or even when ſpoken to in a louder voice, he loſt the half of what was ſaid, from the impreſſion of the firſt ſound remaining ſo long upon his ear, as to render the following ones indiſtinct. Under theſe diſagreeable circumſtances he continued a whole year, during which he tried bliſters, ſyringing, and every

every thing that could be thought of, both by himſelf and ſome very eminent phyſicians whom he conſulted, without receiving the leaſt advantage. His patience was at length quite exhauſted, and he reſolved to reſign himſelf to his fate, and lay aſide the uſe of all applications, thinking that they clogged his ears, and rendered ſounds more confuſed. In this ſtate of inactivity and deſpondence he continued two months, without perceiving the leaſt alteration, until at laſt fortune, who often beſtows upon us thoſe good gifts that reaſon and forecaſt have in vain ſought for, caſt a perſon in his way, whoſe daughter had ſuffered under the like calamity, for a ſpace of time he does not at preſent recollect, and whoſe hearing had been luckily reſtored in a very ſimple and unexpected manner. Her noſe happening to be ſtopt by a cold, that hindered the intercourſe of air through that organ; to rid herſelf of this inconvenience and make a paſſage for it by that way, ſhe cloſed her mouth, and applying her fingers to her noſe, made a violent effort to emit her breath, when inſtead of pro-

curing a paſſage through her noſe, ſhe found one into her ears, which occaſioned each to crack like a piſtol. The experiment was attended with ſo little trouble, that he made the trial in the ſame manner; but after many attempts it proved unſucceſsful. Loth, however, to remain in that melancholy ſtate, which is ſo remarkably the lot of Deafneſs, he at laſt made ſome little alteration in his method, and to his inexpreſſible joy it had the deſired effect. Inſtead of filling his mouth with air, he kept his lips cloſely preſſed to his gums and teeth; this made the air exert its full force about the entrance into the *larynx*, and the firſt trial with theſe alterations ſucceeded with one ear. In twenty-four hours, during which time his many anxious efforts to recover ſo valuable a bleſſing, may be more eaſily conceived than expreſſed, the like ſucceſs attended him with the other ear. For the ſpace of three days afterwards, he was obliged to avoid all company on account of the diſagreeable impreſſion each ſound made upon his ears; he could hear diſtinctly a whiſper

from

from a diſtant part of a room, frequent trials of that kind having been made, to prove the reality of the cure: he has ever ſince enjoyed as uſual that ineſtimable faculty. From the circumſtances of this caſe, the ſituation of the diſorder in the *Euſtachian tube*, was evident; and the extraordinary and unexpected cure rouſed my attention in the higheſt degree. I muſt own, that the almoſt magical manner in which it was performed, caught my fancy ſo much, that I obliged all my deaf patients to make efforts ſimilar to thoſe deſcribed in this caſe. The natural conſequence of which was, that I failed in vaſt numbers of inſtances where the diſeaſe was not ſituated in the *Euſtachian tube*. One good, however, reſulted from theſe indiſcriminate trials, which was, that I became able in a conſiderable degree to point out the characteriſtic differences between it and other kinds of Deafneſs. Among the inſtances wherein I failed, or was only partially ſucceſsful, two being attended with remarkable occurrences ſhall be mentioned here.

A ſingle lady who had been formerly deaf for ſome weeks and been ſuddenly relieved from it, was after a cold, ſeized a ſecond time with Deafneſs, which continued increaſing upon her for ſome months. I ſaw her after the malady had continued three months, when I recommended to her the method already deſcribed, without effect. She afterwards applied to an auriſt in this town, who pronounced the caſe to be nervous, and applied a perpetual bliſter behind the ear; after this had been kept on for ſome weeks, ſhe was as before inſtantaneouſly relieved by a ſudden noiſe in her ears. Both from the ſuddenneſs of the relief and other ſymptoms, I am led to believe that the ſeat of complaint was in the *Euſtachian tube*: I am likewiſe convinced that ſhe never uſed the method preſcribed with ſufficient force, as I could not perſuade her to try it before my face, ſhe ſeeming diſpleaſed with its ſimplicity, and immediately applying to an auriſt, who treated it with becoming importance.

The ſecond caſe was of a beautiful young lady, ſiſter to an ingenious Surgeon of this town, who had been deaf to a conſiderable degree for above two years. From a thorough conviction of the ſeat of the diſorder, I ſtrongly recommended the foregoing method, and got her brother to ſecond my perſuaſions. The conſequence was, that ſhe appeared at firſt perfectly cured; but I find that the complaint has ſince repeatedly returned: ſhe is, however, always conſiderably relieved by the ſame method as at firſt.

I ſhall come now to ſome more general remarks upon the diſeaſe, drawn from all the caſes I have ſeen of it. The moſt frequent cauſe I have found to be the catching of cold, as it is called in this country, which anſwers to the *Coryza* of Hippocrates, and *deſtillatio* or *gravedo* of Celſus. This probably acts by inflaming and ſwelling the ſoft mucous glandular membrane that lines the part of the tube next the *fauces*. The ſecretion of theſe glands becoming viſcid, may likewiſe block up the tube, and ſo occaſion

occasion Deafness, as we see in and after many fevers. It is likewise known that a *polypus*, a swelling of the palate, or repeated inflammations of the *tonsils*, produce the same consequence. *Apthæ*, or an erosion of the muscles of the tube likewise produce it; any inflammation that produces cohesion between its sides will likewise have a similar effect.

From what I have seen, women appear more liable to Deafness than men, and also I believe to this particular species; but upon this I am not able to determine at present.

There seems to be a considerable consent between the two ears, perhaps as great as between the eyes. Thus, upon one ear being stopt with the finger, the hearing of the other is rendered very dull and confused. *Sanious* or *purulent* discharges frequently appear from both; and one ear is seldom long affected without the other suffering in the end. These facts are obvious in the external ears, and are, I believe,

believe, equally true, as to the *Euſtachian tubes.*

The marks by which Deafneſs is known to proceed from an obſtruction of the *Euſtachian tube*, are, 1ſt, Its being preceded by ſome of the cauſes already mentioned. 2dly, On making an effort to expire, and at the ſame time retaining the breath by ſtopping the mouth and noſe, no preſſure is found upon the *tympani* of both ears; whereas if the tube be not obſtructed, and the effort be very conſiderable, the preſſure is ſo great as to be attended with pain, and to endanger the rupturing of the *membrana tympani.* And here it is to be remarked, that a preſſure upon the *tympanum* of one ear is not ſufficient, on account of the ſympathy mentioned in the laſt paragraph, unleſs that preſſure be obſerved in each of the ears at different times, a thing not likely to happen. 3dly, The ſound of the deaf perſon's voice appears different from what it did before, and alſo from the ſound of any other perſon's. This, however, is only remarkable

where both tubes are ſtopt, as where one only is affected, the perſon's own voice is heard equally as well as formerly. 4thly, There ſeems always to be a noiſe heard by the perſon, as if in their own ears. This ſometimes reſembles the ſound of a tea-kettle before it boils, at others it is a roaring like water, or like high wind blowing through trees, or even like thunder. This noiſe is heard when one ear only is affected, though perhaps not in the ſame degree. An eaſy experiment may be thought to militate againſt this opinion, which is the ſtopping one or both ears with our fingers, when immediately a ſounding is heard in the head of the kind juſt mentioned: but it is to be conſidered, that in this caſe a quantity of air is included between the finger and membrane of the *tympanum*, a thing which can never happen in diſeaſes of the external *meatus*, but is preciſely what happens in obſtructions of the *Euſtachian tube*. 5thly, Perſons deaf from this cauſe hear better in a carriage, or in any conſiderable noiſe. I am ſenſible that this has been attributed by ſome to the tenſion given

given thereby to the muſcles of the ſmall bones of the ear; whether this, however, be not hypothetical, muſt be ſubmitted to phyſiologiſts. 6thly, When one tube is obſtructed, the hearing is much more impaired in proportion than when the external *meatus* of only one ear is ſtopt. This is not to be underſtood of the ſound of their own voice, which is perceived equally as before. And I am led to conclude, that in all caſes of Deafneſs, where one or both tubes remain open, and when the internal parts of the ear are not diſordered, the patient hears his own voice as well as formerly, and therefore we find them always ſpeaking in a lower voice than other people.

After all I have ſaid, however, of the diſtinguiſhing marks of theſe different ſpecies of Deafneſs, there are caſes where it is very difficult to decide. And in many caſes it appears evident that both the tube and the external *meatus* are affected, which is no more than what we perceive in diſeaſes of moſt other parts of the body; the parts

parts in contiguity and connected with them becoming frequently affected.

According to the different causes from which the obstruction of the tube arises, the consequent Deafness is curable or otherwise. Where it is owing to any glutinous matter stopping the passage, or a simple swelling of the membrane which lines it, or a tumor in the neighbourhood, it is plainly within the reach of the medical art. To these causes I shall therefore principally refer in what is to follow.

When it is slightly infarcted with this matter, the first and most simple way in which it is freed from it is by the action of swallowing. This seems to produce its effect by putting the anterior cartilaginous and membranaceous part of the tube in motion. That this part of the tube is moveable, or at least contractible, all authors agree; and any person who will carefully attend to his own feelings, will perceive a peculiar sensation in his ear in performing deglutition. I have often

found

found that a ſlight obſtruction in my ear has been removed by this effort, and therefore whenever I perceive the hearing ſtopt with a little ſinging in my head, I, as it were, mechanically perform it. Others, I doubt not, have experienced the ſame, though without taking notice of it, or knowing whence the benefit ariſes.

Gaping, yawning, and gargling, have all been known to cure it, and probably act in a ſimilar manner to the laſt.

Whatſoever forces a current of air into the tube, often removes Deafneſs; and this will have its effect whether the diſorder proceeds from viſcid matter, as in the laſt caſe, or from a ſwelling and puffineſs of the *mucous* membrane. In the action of bawling or ſpeaking very loud, the air is forced out of the *thorax* with impetuoſity, and though part of it finds a vent through the mouth and noſe, yet ſome of it will paſs into any cavity that will admit of dilatation, which is the caſe of the *tympanum*, the membrane of which may be

protruded

protruded confiderably outward. Coughing has a fimilar and more powerful effect, and fneezing ftill a greater; thefe have been therefore known often to give relief. The action of vomiting falls likewife under this head, although at firft the propriety of placing it here may not be evident. It is, however, a compound action, for we not only evacuate the ftomach, but at the fame inftant force the air out of the lungs with great violence, to prevent, I fuppofe, any of the matters then paffing over the top of the *larynx* from dropping into the *afpera arteria*. Another fpecies of effort has been faid to cure this complaint, and may, I think, be ranked here, although the connexion be lefs apparent than in the former cafe, that is, retention of the breath. After retaining the breath for any confiderable time, we are obliged almoft convulfively to expel it, the effect of which latter action has, I apprehend, been confounded with the former, by thofe who have recorded its ufefulnefs in the difeafe.

I have

I have already mentioned that a ſwelling of the membrane which lines the inſide of the tube will cauſe Deafneſs. This beſides may produce the former cauſe by thickening the *mucus* ſecreted there, as we moſtly ſee in inflammations of glandular parts. Whatſoever therefore aſtringes this membrane, or even the parts in contiguity with it, may be of ſervice. It is in this way that gargles may have cured the diſeaſe. Unloading the veſſels of this membrane is alſo evidently a natural and efficacious mode of cure. This may be accompliſhed by cupping, bliſters, or iſſues, in the neighbourhood, or by producing general depletion by purgatives, all of which modes have been ſometimes ſucceſsful. Under this head may be alſo arranged the advantage often perceived from wearing a flannel cap, or other warm covering of the head at night. Theſe latter remedies may likewiſe be combined with thoſe in the former paragraph, inaſmuch as the leſſening any ſwelling of the ſolids will make the obſtructing matter more eaſily removed.

Syringing the external ear may ſometimes have been of ſervice from the effect of applications never being confined to the part alone which they touch, but being propagated to the contiguous ones, eſpecially thoſe parts that are connected with them.

The laſt mode of cure which I ſhall mention, is by injections into the tube, either from the mouth or noſe. The injecting from the mouth ſeems rather impracticable; from the noſe it has beyond a doubt ſometimes ſucceeded: and whoever would wiſh to know more of this method, may conſult Mr. Wathen's very ingenious paper on the ſubject, in the forty-ninth volume of the Philoſophical Tranſactions.

Having thus run over the various things that have ſometimes been ſucceſsful in the cure of this diſeaſe, it remains only to point out the degree of dependance that can be placed in them. The ſimpleſt, and apparently, the moſt certain and powerful, is the mode of injection; in which the reſt

of

of the frame is in no way ſtrained or put out of order. But this is liable to objections. The liquid uſed may fall into the *trachea*, and raiſe a troubleſome cough, or what is of much more conſequence and appears to me inſuperable is, that the moſt ſkilful perſon can never be certain that he has introduced the point of the ſyringe into the orifice of the tube; and even although it be, unleſs it can be preſſed on ſo far as to be firmly wedged into the narrow part of it, the fluid will all return by its ſide into the noſe or mouth, exerting little or no force on the obſtruction. I am more confirmed in this opinion from converſing with Mr. Wathen on the ſubject, who I find is not nearly ſo ſanguine in his hopes of cure from it as he was originally.

All the other modes of cure mentioned, evidently fall ſhort in power and efficacy of the one mentioned in Mr. Stephens's caſe, I ſhall therefore content myſelf with laying down ſuch farther directions as I have ſince found uſeful in the proſecution

of it. Perſeverance in repeating the efforts is very requiſite in this way, in the ſame manner as we ſee in reducing Hernias, or in child-bearing, a number of efforts ſucceed, any one of which ſingly appears of no ſervice whatever. Conſiderable force is likewiſe requiſite; indeed, I always order the force to be increaſed until the air is found to ruſh againſt the *membrana tympani*, and, by forcing it outward, to give pain. In caſes where only one ear is originally affected, I think it beſt to ſtop the other one externally with wax, or ſome other ſoft adheſive ſubſtance, whilſt uſing the efforts to expel the breath, leſt their violence might rupture the membrane of the *tympanum* of that ear in which the tube is free, or at leaſt give it conſiderable and unneceſſary pain. Where the Deafneſs has been of long ſtanding, if the efforts made in this way do not ſucceed at firſt, I think it beſt to have recourſe to bliſters, or ſome of the methods mentioned in a preceding paragraph for emptying the veſſels of the tube, after which the efforts are renewed at times with ſuperior efficacy.

Deafneſs from other cauſes I do not mean to inveſtigate here, and hope to be excuſed the conciſeneſs with which I have treated the ſubject, as it is not my wiſh to write to thoſe who will not take the trouble of reflecting. My chief intention is to procure a fair trial to a method I have in ſeveral inſtances found ſucceſsful, and I ſhall think myſelf happy, if by means of what I have written any perſons recover the ineſtimable gift of hearing.

ARTICLE VI.

Caſe of a Retention of Urine from external Violence, cured by puncturing the Bladder through the Rectum. By Mr. WILLIAM NORRIS, F. M. S. *Surgeon to the* CHARTER-HOUSE *and* GENERAL-DISPENSARY.

Read December 11, 1785.

OF the innumerable diſeaſes to which mankind are liable, thoſe which affect the bladder and its appendages are far from

 being

being the moſt inconſiderable. Whether we conſider a Retention of Urine as immediately affecting the patient's life, by occaſioning the bladder to burſt, or the urine to be abſorbed; or, as laying the probable foundation of future diſeaſes, in many inſtances worſe than death, ſuch as *fiſtulæ in perinæo*, &c. &c. it highly deſerves the Surgeon's moſt ſedulous attention. Any fact, therefore, founded on experience, which tends to prevent or alleviate thoſe evils, is certainly worthy of being communicated; eſpecially when it in any degree oppoſes the doctrine of thoſe whoſe opinions have, with great juſtice, ſo univerſal an influence on the practice of ſurgery in this country.

On Saturday the of June, 1785, I was deſired by Mr. Slater, of Red-Croſs-Street, to viſit, with him, William Revell, who had a Retention of Urine. The account which Mr. Slater gave of this caſe was as follows: That the patient, aged thirty-ſix, having been at work the Thurſday preceding, upon a ſcaffold about ſix or ſeven feet

feet high, which unexpectedly giving way, he fell upon his breech, and his *perinæum* came with confiderable violence againft the ridge of a penthoufe; that he had an immediate inclination to make water, but that notwithftanding his utmoft endeavours he could not pafs a drop; and that immediately after this the *perinæum* and *fcrotum* became fwelled, black, and painful. That he had been blooded, fome purging medicine given him, and that the parts had been fomented. The next day the appearances were nearly the fame, and the *catheter* was attempted to be introduced, but in vain.

On Saturday morning, when I firft faw him, the *fcrotum* was diftended to the fize of a child's head, the cellular membrane of the *penis* loaded in a remarkable degree, and both, together with the *perinæum*, were as black as ink; the *abdomen* was tenfe, and extremely tender to the touch, and the blacknefs extended up on each fide, though in a fmaller degree, as far as the ribs. The *preputium* was fo extremely loaded with extravafated blood, that it was

not without great difficulty and long endeavours I at laſt ſucceeded in getting a ſight of the orifice of the *urethra*.

In attempting to paſs the *catheter*, the inſtrument met with no obſtruction until it came to the anterior part of the proſtate gland, at which place it ſeemed to get into a kind of pouch, and out of the proper direction of the *urethra*. I tried bougies of various ſizes, from the largeſt to the ſmalleſt, but with no better effect; they all ſtopped at the ſame part of the *urethra*, which was oppoſite to that of the *perinæum* on which he had fallen. I ordered the parts to be fomented, a doſe of purging phyſick to be taken directly, and afterwards ſixty drops of *tinctura thebaica*, with a little warm water to be injected *per anum*. As this caſe appeared to be highly dangerous, and would probably require an operation, I deſired a conſultation, and in the courſe of the day I met Mr. Vaux and Mr. White. The *catheter* and bougie were repeatedly attempted to be introduced by thoſe gentlemen, but to as little

purpoſe

purpoſe as before. It was then agreed to puncture the bladder through the *rectum*; but as the confirmation of our opinion, by ſome perſon of more experience, would give ſatisfaction, eſpecially as the caſe was in ſome reſpects new, it was propoſed to wait for ſuch advantage. The next morning at ten o'clock we met Mr. Watſon, of the Weſtminſter-Hoſpital, who likewiſe endeavoured to introduce the *catheter*; and had it been poſſible, I doubt not that this gentleman's dexterity and perſeverance would have effected it—but he alſo was foiled. Mr. Watſon's opinion then coinciding with that which we had before given, the man was placed upon a table in the ſituation of one who was to be cut for the ſtone, and with a curved *trochar* I punctured the bladder from the *rectum*, as high up as I could reach with my firſt and ſecond fingers. About three pints of urine came away, and the man was inſtantly relieved. A deep inciſion was then made into each ſide of the *ſcrotum*, from which a large quantity of extravaſated blood was diſcharged, together with ſome air;

air; for *emphysema* and a ſmall gangrene had taken place on one ſide; the parts were then rolled up in a piece of doubled linen, which was kept conſtantly moiſt with *ſpir. vin. ten.* and orders were given that the man ſhould live very low. The next day he was tolerably eaſy; the tenſion of the *abdomen* had in a great meaſure gone off, but it was ſtill very tender on being preſſed. Urine came through the wounds in the *ſcrotum*, as well as through the puncture. On the third day after the operation, he began to paſs ſome of his urine in the natural way; and each ſucceeding day he was able to retain a greater quantity, and more paſſed through the *urethra*. At the end of a week a large ſlough was thrown off from the *ſcrotum*, and the wounds began to heal. At this time, notwithſtanding the ſtricteſt injunctions of Dr. Hamilton, who did me the favour to ſee the patient, it was impoſſible to keep him to a low regimen; neither entreaties, nor the repreſentation of the probability of the artificial opening not cloſing, owing to ſuch irregularities, could prevent him

from

from eating roaſt beef and drinking wine. I therefore diſcontinued my attendance, and I heard that he was quite well, and following his buſineſs, at the end of three weeks from the operation[g].

This inability to diſcharge the urine might have proceeded from the tumor formed by the extravaſated blood mechanically preſſing againſt the ſides of the *urethra*—or, by the violence of the blow, a breach might have been made in the *urethra*, through which the urine might have paſſed into the cellular membrane of the *ſcrotum*, and neighbouring parts.

That the latter was a principal cauſe, I am fully of opinion, for the following reaſons.

[g] Before I began to copy this paper from the notes I had taken, I ſent for the patient, by whoſe account I found, that when he made water, ſome generally came through the *rectum*. He ſaid that this was the only inconvenience he felt. He now imagines that no urine came through the wounds in the *ſcrotum*; but why he thinks ſo, I could get no reaſon, except that the wounds healed: at the time, he was as perfectly convinced as I was, or am, that it did come through and in conſiderable quantity.

The

The tumor in the *perinæum* and *ſcrotum* became very conſiderable immediately after the accident, and the man's ſtrong endeavours to make water.

In the different attempts to introduce the *catheter* and bougie, little force had been employed.

On the day of the operation, and afterwards, urine was obſerved to come from the wounds in the *ſcrotum*. The bladder contained only about three pints, though the man had not made water from Thurſday until Sunday, and had in the mean time, I underſtood, drank freely of barley-water. And on the ſuppoſition that this increaſing tumor was formed ſolely by blood, it is reaſonable to ſuppoſe that an opening being made, ſome bleeding veſſel would have been diſcovered; but no appearance of freſh blood was obſerved.

It may alſo be worth noticing, that ſeveral times between thoſe days, while the patient ſtrained to make water, he had ſtrongly the idea of the urine paſſing, and

could only be convinced of the contrary, by examining the end of his *penis*.

I am therefore perſuaded that he had, at different times, voided his urine into the cellular membrane; and ſhould a caſe ſo circumſtanced ever again occur to me, I ſhould, with ſtrong hopes of ſucceſs, try the effects of inciſions into the *ſcrotum* only. In the foregoing inſtance, I think they would have been quite ſufficient. The *canula* was left in the wound, and covered by a compreſs and the T bandage, but the man having occaſion to go to ſtool in the courſe of the night, it was forced out by his efforts, and the paſſage of the fæces. To replace it in the morning might have been very difficult, but I was not anxious about it, and therefore made no attempt; for, I imagined, the longer the *canula*, or any other foreign body, was ſuffered to remain in the artificial opening, the more liable would its edges be to inflame and ſlough, and leſs likely afterwards to heal, though the natural paſſage ſhould be reſtored—and that ſo long as the *urethra* continued obſtructed, the contraction of the

the bladder would force the urine through the opening, ſo as effectually to prevent its cloſing. In the foregoing caſe no inconvenience aroſe from its removal; and I believe it might always be omitted with advantage, after the operation. In this opinion I have ſince been much ſtrengthened by the relation of a caſe by Mr. Forſter, wherein he punctured the bladder through the *rectum:* he withdrew the *canula* as ſoon as the urine was diſcharged, and the wound healed almoſt immediately. In another caſe which happened to the ſame gentleman, the operation was deferred too long, and the patient died. If it be neceſſary to puncture the bladder, the operator will find conſiderable advantage from placing two fingers in the *rectum* inſtead of one, as has been recommended; for the *canula* may very conveniently be paſſed up between them, and kept in a proper direction without giving any pain, while with the other hand the *ſtilet* may be introduced, which ſhould never be done until the upper end of the *canula* has been placed exactly againſt the ſpot where the opening is intended to be made.

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The practice[h] adopted in the above caſe has not the claim of novelty to recommend it, as it was publiſhed in the year 1760 by M. Pouteau, in his *Mélanges de Chirurgie*, from a paper of Monſ. Flurant. But it has not been common in this country; and I have ſeen two caſes which ended fatally, in which I think the lives of the patients might have been ſaved by a timely performance of this operation[i].

[h] For the hint of introducing two fingers inſtead of one, I am indebted to Mr. Watſon.

[i] Nothing can be farther from my intention than to adviſe this operation to be had recourſe to, wantonly. I only mean to ſtate it as my opinion, that, when the ordinary and more gentle means have been tried unſucceſsfully, this is a mode of giving relief that may be very eaſily adopted.

A Retention of Urine is a diſeaſe highly dangerous, there being few practitioners of experience who don't know of more than one caſe of it proving fatal; and the propoſed remedy is, comparatively ſpeaking, without danger.

A very reſpectable author, ſpeaking of the puncture of the bladder, even *above the os pubis*, which is, I think, a much leſs eligible ſituation, ſays, "D'ailleurs, je n'ai "jamais vu arriver d'accidens en conſéquence de cette "ponction; je la regarde, pour ainſi dire, comme un "*coup d'épée dans l'eau*, j'ai pratiqué ſouvent cette "opération, & je m'étonne qu'elle ne ſoit pas autant "uſitée qu'elle merite de l'être."

Traité des Mal. Chir. par M. J. L. Petit. tom. iii.

ARTICLE

ARTICLE VII.

Some Remarks on the Effects of Lignum Quaſſiæ Amaræ, *by* J. C. LETTSOM, M.D. *&c.*

Read April 3, 1786.

IN the year 1763, Carolus M. Blom gave ſome account of the *Lignum Quaſſiæ Amaræ*[k], in a Theſis which was publiſhed in the ſixth volume of *the Amænitates Academicæ* of Linnæus.

Few eſtates in the Weſt-Indies, cultivated as they univerſally are, by the labour of Negroes, are without one of theſe miſerable ſlaves of the name of Quaſſi. In

[k] To diſtinguiſh it from the Quaſſia Simaruba. Quaſſia floribus monoicis, foliis abruptè pinnatis: foliis alternis ſubpetiolatis, petiolo nudo, floribus paniculatis. Lin. fil. ſuppl. 234. Simaruba, Aubl. Act. Paris. ann. 1776. Simaruba Amara, Aubl. Guian, t. ii. p. 859. Euonymus fructu nigro, vulgo Simaruba, Barr. Franc. Equinox. Buchoz, Diſſertation ſur le Quaſſi.

the

Quafsia Amara.

the province of Surinam, a negro of this name was the firſt who applied the roots of a tree to medicinal purpoſes, which has ſince been diſtinguiſhed by the ſame appellation. It is ſaid, that by his ſucceſsful exhibition of this vegetable, in Fevers, he acquired ſuch reputation among his equals, as ſoon to be conſulted by their maſters, and thereby drew the attention of M. Dahlberg, counſellor of the province, by whoſe endeavours the tree was aſcertained, and ſpecimens of it ſent to the late Profeſſor Linnæus, who introduced it into his public lectures on the *Materia Medica*. It was deſcribed as almoſt peculiar to Surinam, but ſubſequent inquiries have ſhewn it to be indigenous to ſome Weſt-India iſlands, particularly the Caribbæan; inſomuch that the tree has been applied to the purpoſe of ſtaves, to head ſugar hogſheads, till the bitterneſs of it was found to give this taſte to ſugar, nearly to the extent of an inch next the wood.

Its botanical characters are deſcribed in the *Amœnitates*, in the follow-

ing words, to which I ſhall add a tranſlation.

QUASSIA.

CAL. *Perianth.* pentaphyllum, breviſſimum: foliolis ovatis, perſiſtentibus.

COR. *Petala* quinque, lanceolata, elongata, ſeſſilia, æqualia. *Nectarium* ſquamis quinque, ovatis, villoſis, baſi filamentorum interiori inſertis.

STAM. *Filamenta* decem, filiformia, equalia, longitudine corollæ. *Antheræ* oblongæ, incumbentes.

PIST. *Receptaculum* carnoſum, orbiculatum, elevatum, germine latius. *Germen* ovatum, ex quinque compoſitum. *Stylus* filiformis, longitudine ſtaminum.

PERIC. quinque, lateralia, diſtantia, receptaculo carnoſo orbiculato inſerta, ovata, obtuſa, bivalvia.

SEM. Solitaria, globoſa.

CAUL.

CAUL. teretes, arborei, cinerei: *ramis* raris nec multum ſubdiviſis: ramulis ultimis viridibus: punctis impalpabilibus albis adſperſis.

FOLIA pinnata, alterna, *petiolata, patentia: *Petiolis* communibus, ſpithamæis, utrinque marginatis membrana latiuſcula, ad ortum foliorum contracta, terminatis in mucronem mollem, ſubulatum, marceſcentem, pubeſcentem. *Pinnæ ſ. Foliola* trijuga ſeu quadrijuga ſeſſilia, rarius exacte oppoſita, lanceolato-ovalia, acuminata, integerrima, lævia, glabra, nonnihil venoſa, patentia, pervigilia, coccis heſperidum (in hybernaculis noſtris) valde obnoxia, ante explicationem conduplicata, digiti longitudine, duorum pollicum latitudine membranæa, nec rigida, perſiſtentia ſæpe per totum autumnum, non tamen perennia, læte viridia.

* This is corrected in the annexed plate. The younger Linnæus, explains the miſtake of the Father. "Figura Floris "in Diſſertatione Parentis de Quaſſia vera eſt," ſed ramulus cum foliis ad aliam pertinet. Vide Supp. Plant. p. 235.

 FULC.

FULC. *Stipulæ* nullæ ſunt, nec *arma.* RACEMI terminales, ſimplices. *Bracteis* alternis, linearibus reflexis: corolliſque magnitudine et fere ſtatura Dictamni albi.

Ex dato itaque charactere omnino quidem liquet QUASSIAM noſtram proxima cum ZYGOPHYLLO, quod etiam ſquamas ad baſin filamentorum habet nectariferas, affinitate conjunctam eſſe. Utramque vero arborem non ejuſdem eſſe generis ſatis indicat fructus, qui in Quaſſia, more OCHNES, ad idem receptaculum carnoſum pericarpiis quinque gaudet diſtantibus, monoſpermis; in Zygophyllo vero capſula 5-locularis eſt atque polyſperma. Atque ſic genus QUASSIÆ in eodem a ZYGOPHYLLO differt gradu, quo differt a Ruta Dictamnus.

1. QUASSIA *amara. Spec. Plant.* ii. *pag.* 553. unicum verum nomen eſt, quod huic vegetabili impoſitum eſſe reperio.

NUX Americana, foliis alatis bifidis. *Comm. Hort.* i. *p.* 183. *t.* 94. juvenis eſt arbor,

arbor, quæ noſtram admodum refert, utut nondum ſatis adulta. Non me quidem fugit, quod DOM. BROWN aliique, Melicoccam hanc Figuram Commelini habeant; vero tamen eſt ſimile, illam Quaſſiæ potius adjiciendam eſſe, nec forſan ullo modo ab illo differre. Ceterum nulla alia hujus vegetabilis invenire potuit ſynonyma.

Quod ad arborem Quaſſiæ attinet, illa pluribus abhinc annis, in horto noſtro Academico læte viguit, adque altitudinem octo pedum pertigit. Quoniam vero flores hæc proferre nunquam viſa eſt, ſemper pro ſpecie quadam *Sapindi*, cui multum facie externe aſſimilatur, habita eſt, donec tandem NOBILISS. DOM. PRÆSES folia ſupra commemorata, in Muſæo Dahlbergiano, obtinuit, et eadem eſſe cum foliis arboris noſtræ obſervavit, unde ſic verum hujus nomen nobis innotuit.

LIGNUM QUASSIÆ eſt caudex deſcendens, ſeu radix prædicta arboris, a plurimis tamen lignis nulla ſe diſtinguens nota ſingulari. Albicans eſt, craſſitie brachii

 humani,

humani, at, aeri per aliquot tempus commiſſum, nonnihil flaveſcens. Medulla cum alburno cohæret, nec ab illo ullo modo ſeparatur. Cortex eſt tenuis, colore griſeo, inæqualis et rudis, interdum fiſſuris quaſi exulceratus. Hinc ratione ſtructuræ externe difficillime ab aliis dignoſcitur.

CALYX, a *Perianthium* of five leaves, very ſhort: the leaves ovate and permanent.

COROLLA, compoſed of five, long, lanceolate, ſeſſile, equal *Petals.* *Nectary* conſiſting of five, ovate, villous ſcales, inſerted on the inſide of the baſe of the filaments.

STAMINA, ten filiform equal *Filaments*, the length of the corolla. *Antheræ* oblong and incumbent.

PISTILLUM, *Receptacle* fleſhy, orbicular, elevated, broader than the germen. *Germen* ovate, formed of five. *Style* filiform, the length of the ſtamina.

SEED-

SEED-VESSELS five, lateral, remote, ovate, obtufe, two-valved, inferted into the flefhy orbicular receptacle.

SEEDS folitary and globular.

STALKS round, woody, afh-coloured; branches few and not much fub-divided, the extreme fmall branches green, and fprinkled with impalpable white dots.

LEAVES pinnated, alternate, * ftanding in foot-ftalks, fpreading: the common foot-ftalks about five inches long, edged on each fide with a broadifh membrane, which becomes narrower at the bafe of the leaves, terminating in a foft, awl-fhaped, withering, downy point. Pinnæ or leaflets growing in three or four pair, feffile, feldom exactly oppofite, betwixt lanceolate and oval, running out to a point, perfectly entire, hairlefs, flippery, a little veiny, fpreading, very wakeful, extremely fubject (in our ftoves) to the

* Leaves oppofite.

Coccus hesperidum, previous to their expansion folded together, a finger in length, skinny, without any rigidity, frequently continuing through the whole of the autumn, yet not evergreen, of a pleasant green colour.

PROPS. *Stipulæ* wanting, as well as every kind of *arma* or defence. *Racemi* terminal and unbranched. *Floral-leaves* alternate, linear, and reflex'd: flowers nearly as large as those of the Dictamnus albus or Fraxinella.

" It appears clearly from the character here exhibited, that our Quassia is next in affinity to the Zygophyllum, which also has nectareous scales at the base of the filaments. But that both trees are not of the same genus is sufficiently apparent from the fruit, which, in the Quassia, as in the Ochnes, has five remote single-seeded seed-vessels, attached to the same kind of fleshy receptacle; but in the Zygophyllum the capsule has five cavities, and is many-seeded. And thus the genus Quassia differs

fers from the Zygophyllum in the ſame degree as Rue does from Fraxinella."

"Quaſſia amara, Spec. Pl. v. ii. p. 553, is the only true name that we find given to this vegetable."

"The Nux Americana foliis alatis bifidis, Comm. hort. i. p. 183. t. xciv. is a young tree, which very much reſembles ours, and, like ours too, is not ſufficiently grown. We are aware that Dr. Brown and others have conſidered this figure of Commelins as a Melicocca, but it would perhaps with more propriety be referred to the Quaſſia, as it ſcarcely differs from it in any particular. Nor could the before-mentioned author find any other ſynonyms of this vegetable."

"As to what relates farther to the Quaſſia tree, we may obſerve, that it has flouriſhed many years in the garden of the Academy, and grown to the height of eight feet; but as it never produced any flowers, it was always conſidered as a ſpecies of Sapindus, which

which it much reſembles in its external appearance, till our illuſtrious Preſident obtained the leaves before mentioned from the Dahlbergian Muſeum, and diſcovered them to be the ſame with the leaves of our tree, and thus we became acquainted with its true name."

"QUASSIA WOOD is the deſcending trunk, or root of the before-mentioned tree, which, however, is not diſtinguiſhed from moſt other woods by any particular mark. It is of a whitiſh colour, the thickneſs of a man's arm; but expoſed ſome time to the air, it aſſumes a yellowiſh hue. The Medulla or pith adheres to the Alburnum, nor is it by any means ſeparated from it. The bark is thin, of a grey colour, the ſurface uneven, rough, and ſometimes chapped or cracked. Hence from its external appearance alſo, it is with difficulty diſtinguiſhed from other woods."

Dr. Patris* procured ſeeds of the Quaſſia from Surinam, and planted them at Cay-

* See Gazette Salutaire, 1777. n. 41. 42.

enne, where they have vegetated, and flouriſhed, and where the gardens are now ornamented with their beautiful foliage and flowers.

M. Buchoz, of Paris, has publiſhed a Diſſertation on this Exotic, taken chiefly from the *Amœnitates Academicæ*, with additional caſes extracted from his *Journal de la Nature conſiderée, année* 1777, t. iii. p. 107.

In the *Philoſophical Tranſactions*, vol. lviii. p. 81, 82, J. Farley, of Antigua, ſpeaks of the good effects of the Quaſſia in fevers, and particularly in ſome, wherein the Peruvian bark could not be retained upon the ſtomach.

Mr. Long, in his *Hiſtory of Jamaica*, vol. iii. p. 820. art. 188. under the title of *Quaſſia arbor*, recommends the Quaſſia in dropſies, and in putrid and nervous fevers; he deſcribes the following, as the method of adminiſtering it in practice at the Windward-Iſlands. "Boil four ounces "of the bark in two quarts of water until

" reduced to one; rack it off; then add
" a gill of beſt Coniac brandy, which will
" preſerve it from turning ſour; and bottle
" for uſe. A wine glaſs is the doſe for a
" grown perſon, to be taken twice a day
" for ſwellings and dropſical caſes; when
" it is applied in fevers, the wood is pul-
" verized, and the powder given from
" eighteen to twenty grains, as frequently
" as the Jeſuits Bark is uſually exhibited
" for the like intention; or a decoction is
" made of the wood, and given in as large
" a quantity as the patient can bear it; it
" is ſo inoffenſive and mild in its nature,
" that no extraordinary reſtrictions are
" neceſſary in regard to diet."

The virtues of Quaſſia have not been eſtabliſhed on the continent of Europe by many experiments, as Dr. Blom candidly acknowledges, though it has been recommended by Haller and Tiſſot*; and in England it has not been long in uſe: Dr. Blom

* See alſo Rozier Obſervations ſur la Phyſique. Tom. IX. 1777. p. 140. Fermur Deſcription de la Colonie de Surinam, Tom. I. p. 212. Ebeling. Diſſ. de Quaſſia, p. 14. Leverius, Comm. in quo Medicatæ Quaſſiæ vires expenduntur, p. 77. Murray App. Med. Vol. III. p. 432.

has

has mentioned, however, three cafes of its fuccefsful exhibition; Fever of the putrid type; Afthma from mifplaced gout, and Cholic; but from its fenfible qualities, and particularly from its bitter tafte, he confiders it in general as a tonic and ftomachic medicine.

Within the fpace of a few years, I have tried it in feveral hundred inftances, from whence I fhall offer the following remarks on its medicinal qualities.

In cafes of a weakened tone of the ftomach, and of a relaxed nervous habit, Quaffia proves highly beneficial. In debility fucceeding febrile difeafes, the Peruvian bark is moft generally more tonic and falutary than any other vegetable hitherto known; but in hyfterical atony, to which the female fex is fo prone, the Quaffia affords more vigour and relief to the fyftem than the other, efpecially when united with the *vitriolum album*, and ftill more with the aid of fome abforbent. A formula like the following has generally agreed with fuch conftitutions.

℞ *Ligni*

℞ *Ligni Quaſſiæ, raſpati,* ℥*ſs.*
Aquæ fontan. ebullient. ℥*vi. ſtet in digeſtione per horulam et cola.*

℞ *Hujus colaturæ,* ℥*iſs.*
Vitrioli albi, a gr. ſs. ad gr. ij. vel iv.
Tinct. Cardamom. ʒ*i.*
Teſt. oſtreor. pp. ℈*i. m. ft. Hauſtus ter de die ſumendus.*

The number of inſtances of *hyſteria*, and nervous debility, which I have ſeen thus relieved, would be tedious to enumerate here; the following caſe, however, of *epileptico-hyſteria*, is ſo ſingular, that I am induced to offer a ſhort detail of it.

A lady, twenty years old, of a delicate habit, who had had children; without knowing any cauſe, became liable to languor, and great nervous debility; any ſudden noiſe, any circumſtances calculated to excite emotion, brought on hyſterical affections; but they were ſupportable, as they were not attended with fainting, or the loſs of intellect. In proceſs of ſeveral months, ſhe became more ſeriouſly affected,

ed, without any previous cauſe, by paroxyſms, wherein the ſenſes, for a few moments, were ſuſpended: in her family, without any motive of hurry or uneaſineſs, and almoſt in the moment of cheerful enjoyment, ſhe would ſink away in her chair, or fall down, if not ſupported, with ſtruggling, or other ſlight ſymptoms of epilepſy; it laſted uſually four or five minutes; at the firſt appearance, the fits occurred once or twice a week, but at the end of ſix months, when I was conſulted, they ſeldom were abſent a whole day, and ſometimes attacked her two or three times a day; the moſt general time was a little after dinner; ſhe had the *menſes* regular; was a perſon of genteel ſtation of life, who with opportunity of indulgence, was of ſtrict temperance and moderation. She was habitually coſtive, on which account I ordered ſome laxative pills, with an injunction to attend carefully to the due regulation of the body; and, in conjunction with Dr. Sims, the Quaſſia draught before mentioned.

I confeſs,

I confefs, I did not imagine that any confiderable effect would very foon arife from this plan of prefcription. I expected that it would give tone to the ftomach, remove acidity, excite the powers of digeftion, difcharge the effete part by the addition of the laxatives, and gradually ftrengthen the habit, which feemed over delicately conftituted, and thereby obviate the peculiar fpecies of nervous atony. It happened, however, that after the firft ufe of the medicines, fhe had no return of fit.

She had been under the care of an eminent phyfician, who had adminiftered bark, camphor, mufk, caftor, and, I think, chalybeates, without relieving her.

Perfons who have indulged themfelves in hard-drinking, gradually lofe a relifh for folid food, or if the appetite is not fo far vitiated, as totally to obliterate this natural propenfity, it is ufually in fearch of high feafoned and falted fubftances, which neither contribute to wholefome nourifhment, nor to avert the increafing *dyfpepfia*.

Under

Under this ſituation, beſides regulating the diet, the following manner of giving the Quaſſia, has manifeſtly conduced to reſtore the tone of the ſtomach, and improve its digeſtive powers. The following pills I have ſometimes added to promote theſe intentions.

℞ *Infuſi Quaſſiæ,* ℥*iſs.*
Beaume de vie, ʒ*iij. m. fiat Hauſtus bis terve in die ſumendus.*

℞ *Pulv. Radic. Colombo.*
Aloes Succutor. a ʒ*ſs.*
Pulv. Piper Cayenn. gr. vj. m. fiant Pilulæ xij. capt. ij. om. nocte, vel prout venter poſtulaverit.

When it has not been convenient to procure the *Beaume de Vie*, the following may be ſubſtituted, being ſo ſimilar in ſmell, taſte, colour, and operation, as not to be eaſily diſcernible.

BEAUME DE VIE.

℞ *Extract Glycyrrh.* ℥ſs.
Sal Tartari, ʒij.
Aloes Succotor.
Gummi Myrrhæ.
Croci Anglican. a ʒj.
Coque ex Aq. fontan. ℔j. *ad* ℥xij. *Colaturæ, et adde Tinct. Stomach.* ℥iv. *m.*

There are certainly frequent inſtances of perſons of great temperance who are liable to vomiting, both of food and the ſecreted fluids of the ſtomach: I have often met with it in men liable to *hypochondriaſis*, and in the female ſex of very delicate habits, labouring under *Chloroſis Leucorrhæa*, or *Amenorrhæa*. In ſome I have obſerved it, when none of theſe circumſtances have occurred.

When the infuſion of Quaſſia is given in *hypochondriaſis*, *dyſpepſia*, and *gaſtrodynia*, ſome abſorbent and laxative medicine, eſpecially when the exputed fluid is of an acid taſte, is an uſeful addition: when the fluid is thrown up brackiſh, or of a ſweet

taſte,

taſte, Tar-water is often beneficial: it may be taken early in the morning, and the Quaſſia about the middle of the forenoon, and ſome time in the afternoon, when the ſtomach is moſt empty.

In the inſtances accompanied with *Leucorrhœa* or *Amenorrhœa*, two grains of *flores martiales* may be added to the Quaſſia.

Particular attention ſhould at the ſame time ever be had to the quantity of food taken into the ſtomach at once; it ſhould never be overloaded with quantity, nor vitiated with variety; without attention to which circumſtances, our remedies will be fruitleſsly attempted.

In habitual *diarrhœas*, the Quaſſia is moſtly an efficacious remedy, joined with the *teſtæ oſtreorum*, or ſome abſorbent, with or without the *tinctura thebaica*. Perſons liable to this relaxed habit, are frequently for a few days coſtive, and then for as many, perhaps, violently purged;

to ſtrengthen digeſtion, and preſerve regularity in the inteſtinal canal, ſhould direct the conduct of the preſcriber, and few medicines anſwer theſe intentions better than the following.

℞ *Pulv. Rad. Colombo.*
—— *Ligni Quaſſiæ,* ʒ *ſs.*
—— *Ipecacoanhæ,* ℈ *ſs.*
Tinct. Thebaic. q. ſ. fi. Pilulæ xv. capt. iij. om. nocte.

℞ *Infuſi Quaſſiæ,* ℥ *iſs.*
Teſt. Oſtreor. pp. ʒ *iſs.*
Tinct. Thebaic. gut. iij. fiat. Hauſtus bis terve de die ſumend.

If the *diarrhœa* ariſe from bilious acrimony, the ſame formula is no leſs efficacious, after uſing *ipecacoanha* as an emetic, and now and then intervening a mild laxative of ten grains of rhubarb, and as much of *ſal polychreſtum.*

In ſome ſtages of bilious, remittent, and putrid fevers, a *diarrhœa* ſupervenes, which long continued ſinks the patient into irretrievable

trievable debility; or if haſtily ſtopt by opium, or ſtrong reſtringents, is ſucceeded by a fatal *meteoriſmus*, or even *ſphacelus*, of the inteſtines. In ſuch putrid *diarrhœas*, the laxative powder exhibited as an evacuant occaſionally, and the Quaſſia as an antiſeptic tonic, are ſucceeded with very ſalutary effects, as I have repeatedly experienced.

But with reſpect to the tonic and febrifuge qualities of Quaſſia, I by no means ſubſcribe to the Linnæan opinion, where the author ſays, *me quidem judice, chinchinam longe ſuperat*[1]: it is very well known, that there are certain peculiarities of the air, and of idioſyncraſes of conſtitution, unfavourable to the exhibition of the Peruvian bark, even in the moſt clear intermiſſions of fever, and writers have repeatedly noticed it; but this is comparatively very rare: about Midſummer 1785, I met with ſeveral inſtances of low remittent, and nervous fevers, wherein the

[1] M. Buchoz admits the ſame dangerous ſentiment.

bark uniformly aggravated the ſymptoms, though given in intermiſſions the moſt favourable to its ſucceſs; and wherein Quaſſia or ſnakeroot were ſucceſſively ſubſtituted. In ſuch caſes I moſtly obſerved that there was great congeſtion in the hepatic ſyſtem, and where debility, at the ſame time, diſcouraged copious evacuation. But in putrid fevers, and in the low nervous fever, attended with ſymptoms of putreſcency, the Peruvian bark incomparably bears the palm. When I firſt begun to uſe Quaſſia, about the year 1778, I had many ſuch fevers under care, and exhibited this vegetable freely as a febrifuge, but the ſucceſs I met with, diſcouraged my perſeverance in experiments of ſuch importance to life, whilſt we are in poſſeſſion of a known remedy. There is, however, a certain period in many fevers, where no intermiſſion, ſufficiently clear to exhibit the bark, may occur, whilſt at the ſame time increaſing debility may threaten the life of the patient; at ſuch times, the Quaſſia, or ſnakeroot, ſingly or combined, have upheld the vital powers, and promoted a cri-

tical

tical intermiſſion of fever; which then, the inſtant exhibition of bark, has prevented the recurrence of, and thus reſtored the patient. But I would not hence by any means infer, that the Quaſſia ſhould, in general, ſuperſede the bark in nervous, low, remittent, and putrid fevers; as abundant experience enables me to declare, that the former is not to be relied on in ſuch fevers; and which I think it my duty to do, leſt a diſpoſition to experiment may lead the practitioner to a fatal dependence, to an extent of time, when even the febrifuge powers of bark may not redeem the neglected opportunity for exhibiting it.

After introducing *dyſpepſia* ariſing from the indulgence of drinking, I cannot well diſmiſs the ſubject, without adverting more fully to its painful influence upon the conſtitution, which I have obſerved with more anxiety, as the ſufferers are often thoſe of the more delicate part of the female ſex, whoſe habits of intemperance are not unfrequently introduced by thoſe who ſhould have been the guardians of their health.

The miseries entailed by these unguarded indulgences, differ much as to their progress and violence, and even the symptoms vary so much, as to admit obvious distinctions.

The *First* I shall notice, as being generally less painful, though equally permanent, are the symptoms more especially attendant on persons who have, early in life, habituated themselves to drink freely of wine of various kinds, and from their situations in life, undergone a change of climate, as from Europe to the Indies, &c. Punch-drinkers, likewise, have been liable to similar complaints. The first appearance of disease is a slight degree of *dyspepsia*, which at length is succeeded by *gastrodynia*: the appetite becomes gradually vitiated, and after taking food, before the return of the next meal, a kind of heavy pain of the stomach, with a constriction of the muscles of the *abdomen*, come on, and with a slight effort, a sweetish, brackish, or acid fluid is thrown up, and the pain and constriction subside. For several years in this unhappy state, the patient drags on a life, rendered now and then

then more ſupportable, either by renewed potations, or repeated exſputations, till at length the bodily and mental powers become impaired: the object grows emaciated, the whole body ſhrinks; neither *anaſarca* nor dropſy appear, though the countenance looks ſallow; the region of the liver is not enlarged, but this *viſcus* ſeems leſs than natural: the urine is not very high coloured; the *fæces* are hard and dark coloured: the ſtomach will take and retain food, but after receiving it, it is oppreſſed, and feels tightened or contracted in its dimenſions; the patient expreſſes it, as if it were tied by a ſtraight bandage; the ſame ſenſation affects the inteſtines, and the *abdomen* ſuffers ſuch irregular conſtrictions, as are evident to the external touch, the muſcles being drawn into irregular action, the ſurface of the belly is diverſified with protuberances and cavities: ſometimes the ſpaſmodic ſtrictures run tranſverſely, and raiſe this ſurface like waves of the ſea. The pain continues increaſing to ſuch exceſs, that the miſerable patient is obliged to preſs againſt a

table or ſome hard body, to mitigate his diſtreſs, till vomiting brings a reſpite; or he haſtens this operation, by thruſting his finger into the throat; and thus relieves himſelf till the next reception of nouriſhment, when the ſame tragedy is repeated. The matter diſcharged is thin, acrid, ſour, ſweet, or brackiſh. Sometimes, inſtead of conſtipation, an occaſional *diarrhœa* enſues, and mitigates the pain, whilſt it ſubdues the conſtitution; and after years of miſery, the victim ſlides into a fatal atrophy; but long before this, the powers of the mind have been debilitated, and its recollection and actions impaired.

The *Second* train of diſtreſsful ſymptoms which I ſhall relate, more generally ſucceed the free uſe of ſpirits, or of wines with the admixture of ſpirits, as Madeira; and eſpecially where late hours and illicit amours have been ſuperadded.

The firſt ſymptoms of complaint are, a pain and oppreſſion of the *præcordia* after eating, or diſtenſion from fluids; this pain extends

extends to the clavicles and *ſcapulæ*; there are frequent eructations of wind, which ſeem to burn the throat as they aſcend; theſe ſymptoms, which are uſual in hepatic affections, and particularly in bilious effuſions, are at firſt ſo trivial, as ſeldom to alarm the fears of the patient, or he ſlightly mentions them as ſymptoms of the gout, whilſt he attempts to avert the preſent ſuffering, by indulging more freely in the very cauſe of the miſchief, till repeated fillips of raw ſpirits, or a dilution of the poiſon, render exiſtence miſerable.

The appetite now fails, but an inſatiable thirſt continues, and if it be not ſupplied with an exhilarating cordial, the vital ſpirits inſtantly flag, and ſuch horrors take place, as are dreadful even to a by-ſtander; the poor victim is ſo depreſſed, as to fancy a thouſand imaginary evils; he expects momentarily to expire, and ſtarts up ſuddenly from his ſeat; walks wildly about the room, breathes ſhort, and ſeems to ſtruggle for breath: if theſe horrors ſeize him

him in bed, when waking from ſlumber, he ſprings up like an elaſtic body, with a ſenſe of ſuffocation, and the horrors of frightful objects around him; at the ſame time the pain of the *præcordia* continues and augments; the ſight of wholeſome plain food gives diſguſt, inſtead of appetite; drink is his cry; or if hunger is excited, it is after taſty, ſalt, or acrid nouriſhment.

At this time, if an *aſcites*, or fatal jaundice, do not terminate exiſtence, the legs ſhrink, are ſwarthy-coloured like the reſt of the body, and ſometimes *petechiæ* appear and diſappear for many months; the extremities feel ſore to the touch, and upon ſcratching them, exude blood: the thighs likewiſe ſhrink, but the body, and particularly about the hepatic region, enlarges, and the hardneſs of the liver may be frequently traced; the face is nearly copper-coloured, is emaciated, ſometimes with little ſuppurations, which dry and turn ſcaly; the breath ſmells like rotten apples, and the *morbus niger*, or vomit-

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ings of a fluid like that of coffee-grounds, ſnatch the patient from complicated miſery.—Sometimes a *diarrhœa*, or bloody diſcharges, haſten the cataſtrophe.

The *Third* train of ſymptoms to be deſcribed, is not confined to age or ſex, but is in general more frequently the attendant of the female ſex.

The perſons liable to theſe ſymptoms, have been thoſe of delicate habits, who have endeavoured to overcome the nervous debility, by the aid of ſpirits: many of theſe have begun the uſe of theſe poiſons from perſuaſion of their utility, rather than from the love of them: the relief, however, being temporary, to keep up their effects, frequent acceſs is had to the ſame deluſion, till at length what was taken by compulſion, gains attachment, and a little drop of brandy, or gin and water, become as neceſſary as food; the female ſex, from natural delicacy, acquire this cuſtom by ſlow degrees, and the poiſon being admitted in ſmall doſes, is ſlow in

its

its operations, but not leſs painful in its effects.

The ſoberer claſs of tradeſmen, alſo, who occaſionally indulge in their ſix-penny-worths of brandy and water, gradually ſlide into the ſame unhappy habits, and entail upon their conſtitutions the ſame miſery, which I ſhall now introduce.

The firſt appearance of indiſpoſition very much reſembles what has been laſt deſcribed; and under the deception of the gout, the fuel is heaped upon the fire, till the deluſion has been too long maintained to admit of retreat: in general, at leaſt, the attachment to the uſe of ſpirituous drinks, becomes ſo predominant, that neither threats nor perſuaſions are powerful enough to overcome it. The miſerable ſufferer is ſo infatuated, as, in ſpite of locks and keys, to bribe by high rewards the dependent nurſe, privately to procure the fatal draught.

But the concluding ſymptoms are very different from either of the foregoing hiſtories: frequently, indeed, the appetite for food vaniſhes, but ſometimes continues voracious; and, at the ſame time, whilſt the body is coſtive, and no vomiting enſues, the lower extremities grow more and more emaciated; the legs become as ſmooth as poliſhed ivory, and the ſoles of the feet even glaſſy and ſhining, and at the ſame time ſo tender, that the weight of the finger excites ſhrieks and moaning; and yet I have known, that in a moment's time, heavy preſſure has given no uneaſineſs. The legs, and the whole lower extremities, loſe all power of action; whereever they are placed, there they remain till moved again by the attendant; the arms and hands acquire the ſame *paralyſis*, and render the patients incapable of feeding themſelves. Thus for years they exiſt, with no material alteration in the ſize of the body, or aſpect of the countenance.

Whether they really undergo the agonies they appear to ſuffer, I much doubt, as

as at this period their minds appear idiotiſh: they often ſhriek out with a vehemence that may be heard at a conſiderable diſtance, but upon inquiring about the ſeat of pain, they have been vague and indeciſive in their anſwers. When a cramp comes on the lower extremities, involuntary motions draw up the legs, and produce the moſt piercing ſhrieks: and the features of the face, altered by convulſive twitchings, excite pain in a ſpectator. For ſome months before they die, theſe ſhrieks are more inceſſant, and as violent as the ſtrength will admit.

They talk freely in the intervals of mitigation, but of things that do not exiſt; they deſcribe the preſence of their friends, as if they ſaw realities, and reaſon tolerably clearly upon falſe premiſes.

Moſtly before they die, they take leſs food; ſometimes a *diarrhœa* ſucceeds, of a thin ſubſtance, and of a dark green colour; ſometimes a vomiting of black matter; but moſt generally they gradually ſink

ſink from the accumulation of pain and debility. There is rarely any fever; and after the diſeaſe is far advanced, the *menſes* have continued. They do not, as in the preceding ſtate, fall into dropſies, but uſually become paralytic: the breath is not offenſive, nor is there the ſame difficulty of breathing, or horror of ſuffocation: whether the imperceptible and gradual augmentation in the uſe of ſpirits, is the cauſe of this difference, I am not certain; but the difference is conſiderable, as muſt appear from their hiſtories, which I have drawn from actual obſervation.

I would not, however, infer, that every ſpirit-drinker acquires the ſymptoms of diſeaſe above related, or that other diſeaſes do not more frequently ſucceed this dangerous habit: hepatic affections, of various kinds, it is well known, uſually reſult from intemperance, and dropſies often ſucceed; but from ſome circumſtances in the conſtitution, or from the mode of indulgence in liquors; the ſymptoms I have deſcribed, have ſeverally occurred, where no hydropic

 affections

affections have supervened. There is something in spirituous liquors, so injurious to the human frame, that too much attention cannot be paid in discouraging the use of them. Many of the unhappy victims I have attended, ascribe their sufferings to the unguarded advice of some medical practitioner, who has, under the idea of wine turning sour on the stomach, permitted a little drop of brandy and water to be substituted; seldom, indeed, a day passes without introducing me to the sick bed of some deluded object of misery; and it is from the most decided conviction of the injury, that I would guard every person from beginning with even a little drop of this fascinating poison, which once admitted, is seldom, if ever, afterwards overcome. Whenever I hear the patient plead for some substitute for beer or wine, under the supposition of their turning sour, my fears are alarmed, and my endeavours excited, to pluck the unsuspicious patient from the brink of destruction: this plea is never made, till the exhilirating influence of spirit has been experienced; and not a

moment ſhould be loſt, in warning ſuch objects of their danger.

Some, who avoid brandy, have been induced to take rum, from a vulgar opinion, that it is more oily and balſamic; the argument is erroneous, for what balſamic qualities can empyreumatic oil contain? Others, who condemn both brandy and rum, make no objection to gin; becauſe they think it diuretic; but ſo far from it, that half the dropſies among the lower claſſes of the people originate, or, at leaſt, are confirmed by the uſe of this ſpirit: they are all poiſons, and are nearly alike deleterious.

When the effects of ſpirits on the conſtitution, have not greatly contaminated it, beyond the frequent recurrence of *dyſpepſia* or *gaſtrodynia*; after interdicting ſpirits altogether, the patient ſhould be allowed to fix upon ſome one ſpecies of nutriment; and, whatever it is, ſhould be confined to it alone, and that in the ſmalleſt quantities poſſible, and at regular ſtated

diſtances, that the preceding portion may be properly digeſted, before any addition be allowed: when the ſtomach has thus acquired more tone, either ſome new, or an increaſe of the former nutriment, may be added.

I once attended a lady, who could not retain any food on the ſtomach, above an hour or two. I requeſted her to fix upon ſome light nouriſhment that ſhe could palate, and ſhe mentioned milk: I then reſtrained her to four table-ſpoonfuls of it every ſix hours, and afterwards increaſed the quantity as the ſtomach could bear it. From this ſhe went to broth, and thus gradually acquired ſuch a ſtate of the ſtomach, as to bear the uſual food of the family; and for two years paſt ſhe has enjoyed good health, with the moderate uſe of a glaſs of wine, or of beer, but not one drop of ſpirit.

But in ſome caſes, where the habit of drams has been long continued, the total and ſudden omiſſion of them, has ſunk the perſon into irretrievable debility. Here

this pernicious cuſtom muſt be left off gradually. A man who uſually drank twelve drams a day, being convinced of his approaching miſery, took the reſolution to wean himſelf from this poiſon: he always drank out of one glaſs, into this he daily dropped a drop of ſealing-wax; by this means he had twelve drops leſs of ſpirit every day, till, at length, his glaſs being filled with wax, his habit was cured.

ARTICLE VIII.

Caſes of Hydrocephalus Internus, by JOSEPH HOOPER, Surgeon, F.M.S.

Read May 18, 1785.

THE two following Caſes I have taken the liberty of propoſing to your attention, not as being of a new diſeaſe, but as attended with circumſtances, which, to me, at leaſt, appeared rather uncommon.

The latter end of laſt ſummer, I attended a boy about twenty months old, who had been drooping for three or four weeks, with the ſymptoms uſually attendant on worms, for which he was treated with various *anthelmintics*, without ſucceſs. About a week before his death, his fever, which had hitherto been but ſlight, greatly increaſed, his pulſe was very quick, his ſpirits much agitated, attended with frequent convulſions, and want of ſleep, and at length he became quite delirious. The *ſutura ſagittalis* was not cloſed, and rather more ſpread during his illneſs. Theſe ſymptoms would have left no doubt of the exiſtence of water in the brain, had they not been accompanied with the ſingular one of contracted pupils, unaltered by the different degrees of light falling on the eyes. I ſay, ſingular, becauſe in the deſcriptions of the ſymptoms of the *Hydrocephalus Internus*, which I have read, I think the dilatation of the pupils is one of the moſt general; nor had I ever remarked the contrary, in not a few which had fallen under my own notice. However, this

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proved an exception to that general rule, for on opening the head, we found the ventricles filled with about half a pint of clear water.

The other is the caſe of a male infant, to whom I was called about ſix months ago, and who was then nine months old, afflicted with a dropſy of the head, which had been increaſing from the age of three months, and was then enlarged to a degree beyond what I had ever before ſeen; though the child, in other reſpects, was in perfect health. The mother ſaid ſhe had conſulted ſeveral of the faculty upon the occaſion, one of whom offered to cure the child by tapping. However, having given my ſentiments of the impoſſibility of a cure, by that, or any other means, deſired ſhe would let me know when the child ſhould die. Upon which event I was lately requeſted to come, and examine the head, which I found had gradually continued to enlarge, whilſt the body and limbs became extremely emaciated. The *ſutures* were ſo diſtended, and the bones of

of the *cranium* ſo far ſeparated, that more than half the ſcalp was without any ſkull, and, in ſhort, had more the appearance of a membranous bag, filled with water, than of a human *cranium*. Imagining the water to be immediately under the *dura mater*, I made an inciſion a little to the left of, and parallel with, the longitudinal *ſinus*; upon which a quantity of fluid, perfectly limpid, amounting to upwards of ſix pints, came off, and left the two ſpaces, uſually occupied by both hemiſpheres of the brain, to appearance, empty. This I was, at firſt, not a little ſurpriſed at, till having enlarged the opening, and more minutely ſurveyed the ſtate of things, I found that this quantity, great as it was, had been contained in the two ventricles, having by the rupture of the *ſeptum lucidum*, a free communication with each other. This had diſtended the *cerebrum* to ſuch a degree of extenuation, as to give it the appearance of a ſoft lining to the *dura mater*, about the eighth of an inch in thickneſs. Hence we may learn, how much diſtention the brain will admit of, and that where the

the ſubject is young, and the *ſutures* yielding, the *Hydrocephalus Internus* may continue many months, before it ſhall put a fatal period to the exiſtence of the devoted ſufferer.

Southwark, May 18, 1785.

ARTICLE IX.

Obſervations on ſome Caſes of Hydrocephalus Internus, by J. C. LETTSOM, M. D. &c.

Read June 15, 1786.

THERE are ſome diſeaſes, whoſe ſymptoms are ſo obſcure, or ſo ſimilar to thoſe of other diſeaſes, as to prevent us from forming a certain diagnoſtic, till death enſues, and diſſection aſcertains the cauſe. Of this number we may include the *Hydrocephalus Internus*; for although this

this fatal complaint has been accurately deſcribed by late writers, yet few of the ſymptoms attending it, as pathognomonic, but may ariſe from very different cauſes; as preſſure upon the brain, from various cauſes; dentition; and even from worms in the inteſtinal canal, according to the authority of medical writers.

The very nature and ſituation of this diſeaſe, when aſcertained, afford ſo little proſpect of relief from the powers of medicine, that where, from the chain of ſymptoms, it may reaſonably be ſuppoſed to exiſt, if a cure enſue, we are ready to ſuſpect fallacy in the diagnoſtics, rather than ſucceſs from our remedies: hence it is, that in many inſtances, which I have conſidered as really the diſeaſe under our preſent inquiry, and recovery has reſulted from medical treatment, I have relinquiſhed a pre-conceived opinion, where the ſymptoms have admitted of dubiety.

There are, however, examples within my recollection, with circumſtances ſo unequivocal,

quivocal, of the *Hydrocephalus*, that I deem them not unſuitable for public communication: ſome of theſe caſes I have ſelected, as having more particularly engaged my attention; and I relate them with more ſatisfaction, as they tend to confirm, in ſome degree, the ſuggeſtion of an amiable and learned phyſician, upon the uſe of *mercury* in this fatal diſeaſe.

CASE I.

E. L. a child ſix months old, was attacked in the ſpring of the year 1782, with ſymptoms of *Hydrocephalus*; at four months of age he was inoculated for the *ſmall-pox*, and paſſed favourably through the diſeaſe, and had been hitherto healthy, though a child of a fair lax habit, and light-coloured hair. The firſt ſuſpicion of diſeaſe was indicated by a conſiderable degree of ſtupor, which was ſucceeded in a few days by convulſions in the eye-lids, lips, and muſcles of the forehead, accompanied

panied with contractions of the fingers and toes; the pupils of the eyes became dilated and inſenſible of light; the pulſe, which was at firſt ſlow, became quick and intermitting: a *ſtrabiſmus*, or ſquinting, rendered the diſtorted features ſtill more frightful; the *fontanelle* not being cloſed, upon preſſure a fluctuation was perceptible to the touch, as if the hand had been laid on a bladder diſtended with water: in this ſituation the child had continued upwards of a week, when the following plan was purſued.

The hair upon the *fontanelle* was removed, and a bliſter plaſter applied, and which was kept conſtantly diſcharging for the ſpace of three months, by an ointment made of a ſtrong infuſion of *cantharides*.

One grain of *calomel* was given daily, till two ſcruples had been taken.

From about the tenth day, the ſymptoms ſeemed gradually to abate, till the fortieth, when the child appeared in health. But although

although the fits ceafed, the *ftrabifmus* in part remains to this period, now almoft four years fince the firft attack: after the firft ceafing of the fits, the child was liable, for nearly two years, to returns of them, at intervals of two or three months, without any obvious caufe; nor did they ever appear to depend upon dentition: they have not appeared during the laft year; and the faculties are as brilliant as ufual, at its age.

The child has a voracious appetite; but its indulgence is prevented by the ftricteft attention of the family; and three or four times a year, a *calomel* purgative is given to cleanfe the *primæ viæ*.

CASE II.

EARLY in the year 1775, Robert Davies, the fubject of this hiftory, was attacked with an acute rheumatifm, for which he was attended by a phyfician, under

under whoſe care the diſeaſe was ſo far removed, as to admit of a moderate application to buſineſs; but he never recovered his priſtine health; and towards the end of the year, as the ſeverity of the cold increaſed, he found himſelf gradually more and more indiſpoſed, with a peculiar heavineſs and pain of the head, which induced him, on the 27th of January 1786, to requeſt my attendance: he was at this time about twenty-eight years of age, of a conſtitution rather firm in appearance, though reduced by indiſpoſition. He principally complained of a pain and ſenſe of load, above the forehead, and in the ball of each eye; this ſometimes extended to the nape of the neck, where the pain was compared to a ſtricture, or to the preſſure of a cord drawing the muſcles tight, like a ligature, and ſometimes to a confuſed gnawing pain: when the uneaſineſs in the fore part of the head was the moſt conſiderable, viſion was affected materially; ſometimes he thought himſelf loſt in a miſt, and could ſcarcely ſee at all, and the confuſion was often increaſed by the objects

appearing double; and it became in the exacerbations ſo great, that he was incapable of walking ſtraight, but ſtaggered like a perſon intoxicated; the pupils of the eyes were extremely dilated at all times; the whole features had the aſpect of depreſſion, loaded and gloomy with a melancholy frown; though he had no occaſion of mental diſtreſs, but from corporeal pain; which, when I ſaw him, had afflicted him, at different intervals, for about a month; ſometimes daily, ſometimes at the diſtance of a few days; but the exacerbations did not recur at any determinate periods, nor were they preceded by rigors; but, in general, came on gradually, and augmented in violence, till overcome by agony, he ſought mitigation in bed, or in ſome reclined poſition out of it. The fits were irregular in their duration, ſometimes continuing a whole day, or night, ſometimes both, and even longer, and ſubſided gradually; the pupils, nevertheleſs, continued in a ſtate of extreme dilatation, without any appearance of ſquinting or *ſtrabiſmus*, throughout the whole courſe

of

of the diſeaſe, except once for about ten minutes, a few days before he died.

In the exacerbations of pain, he cried out inceſſantly of his head, laying his hand uſually on the forehead: in theſe ſtates he breathed quick, impetuous; then ſuddenly changing to a ſlow, full, moaning reſpiration: the breath came from him heated, and loaded with a moiſture, as if in a froſty day: he moſtly ſweated profuſely in theſe exacerbations, but without any reſpite to his ſufferings: his body was obſtinately coſtive, which ſtrong purgatives, aided by clyſters, could not always obviate.

In the intervals of eaſe, he enjoyed a little ſociety, and eat heartily; but the frowning countenance was never thrown off, though the periods of mitigation continued ſeveral days, at which times he was able to ſit up and converſe with the family, as if exempt from diſeaſe. The longer, however, the complaints preyed upon his conſtitution, theſe intervals leſſened, the painful returns became more inſupportable,

and

and the ſtrength more and more exhauſted, till death cloſed the tragedy towards the end of March 1786.

When I firſt viſited this patient, I preſcribed ſmall doſes of *calomel*, *cicuta*, and *aconitum*, which he had not taken for the ſpace of a week, when he appeared nearly recovered; and I really told him that I ſhould not attend again without being requeſted.

In the beginning of February, I was informed of the return of his diſeaſe, which now, and for ſome time before I firſt ſaw him, had recurred at irregular periods, with ſymptoms, ſo far reſembling an intermittent, as induced me to give the Peruvian bark very freely during the intermiſſions of pain: the pulſe was generally rather ſlow than quick at all times, though the exacerbations were accompanied with coldneſs, heat, and profuſe ſweating: his ſtomach, in general, bore the remedy very well, except when coſtive, and then he ſometimes rejected it. The conſtipation

was indeed ſo troubleſome, that ſtrong purgatives and clyſters were ſometimes incapable of procuring relief, till repeated for two, and even three, days ſucceſſively.

I thought he was again better by this remedy, but it was of ſhort duration, and he grew weaker in his bodily ſtrength; on which account I recommended a decoction of bark, acidulated with elixir of vitriol, and he ever afterwards continued to take it, from the relief which he imagined it gave him; his attachment to it became, at length, ſo urgent, that he was unhappy unleſs it was by his bedſide.

Before I ſaw him, bliſters had been applied behind the ears, but without any particular relief. About a month before he died, I ordered one ſufficiently large to occupy all the fore part of the head; and for almoſt a week afterwards he ſeemed better, but the diſeaſe again recurred: however, from this partial relief, I was encouraged to try the effects of a *ſeton* in the neck; it gave him much uneaſineſs, and

after

after its application, he ſeldom mentioned the original pain of the head, though he laboured under ſuch a degree of torpor and heavineſs of the head, and debility of the whole frame, as prevented his future enjoyment of ſociety, or of moving out of his apartments.

A few words will ſuffice for deſcribing the anatomical diſſection; the ventricles of the brain contained ſix ounces of limpid water, without any other apparent diſeaſe.

The regular calmneſs of the pulſe, throughout the whole diſeaſe—the long intervals of apparent health—the periodical acceſſions of rigor, fever, and ſweat—the almoſt total abſence of *ſtrabiſmus*—and the perfect ſtate of the ſenſes, made me doubtful of an *Hydrocephalus Internus*, till diſſection aſcertained it. The age I conſider as no objection, becauſe I have ſeen the diſeaſe at all ages under ſixty.

From the impaired ſtate of viſion, and dilatation of the pupils; the frown on the

forehead, and ſenſe of weight in the head, induced me to ſuſpect ſome oppreſſion on the brain; but no affection beſides the *Hydrocephalus* was diſcovered, though great care was uſed in the diſſection, by Surgeons Vaux and Key.

Case III.

G. M. of the Borough, a child about two years of age, had been indiſpoſed about ſix days when I was conſulted, which was on the 12th of March 1786. I was then informed, that he had been feveriſh for about five days, and had ſince that period laboured under ſpaſmodic affections of the legs and arms, and particularly ſo of the toes and fingers, which were drawn inwards, continuing rigid and inflexible. I found the pulſe beat 120 in a minute, and the child lying in a heavy ſtupid ſtate, with a downcaſt forehead, and ſlight muſcular twitchings about the face and eyes: as there were no evident marks of

of teething, I fuſpected ſome miſchief in the head: how far I was warranted in my ſuſpicion, the following obſervations, extracted from the notes I took during my viſits, will in ſome meaſure aſcertain.

He was ordered one grain of *calomel* twice a day. Two leeches were applied to the temples.

March 14. Pulſe 120. The pupils appear to be rather larger than in their natural ſtate.

Repet. Mercur.

March 15. P. 120, with ſome degree of hardneſs. He does not appear to retain viſion; he lays, in general, with his eyes half open, but without ſquinting—has not ſpoken for two days paſt; he appears to ſuffer much pain; frequently draws up his arms and clinches his fiſts; has had many thin ſtools.

Inung. Nucha cum Ung. Cærul. fort ℈*j. quotidie.*

March 19. No material alteration: refuses all nourishment but porter, which he drinks of freely. To-day the pupils are more contracted, but the same stupid state continues: appears to grow weaker; and I now ordered the bark three times a day: small blisters were applied behind the ears.

March 21. The pupils are more dilated; the debility is more evident; the pulse 126. He takes porter; all medicine is intermitted; but the ointment is continued.

March 24. The appearances continued much the same till this morning, when he was taken into the air, and seemed to feel refreshment from it.

After this period the stupor gradually declined, and he by slow degrees recovered his health.

CASE IV.

ON the ſecond of January 1786, I viſited J. Davidſon, a child about four years of age, whoſe ſymptoms I ſhall relate from the minutes I inſerted during my attendance.

About ten days before I ſaw him, he had ſymptoms of fever, with a conſiderable *diarrhœa*; the latter ſoon ſubſided, and the fever was inconſiderable and irregular; but for ſome days he has lain in a heavy ſtupid ſtate; the pupils of the eyes do not appear enlarged.

He was ordered to take a grain of *calomel* every ſix hours, in a mucilage of *gum tragacanth*. A bliſter was applied to the back.

Jan. 3. The *calomel* has not proved purgative, and the patient ſlept laſt night, but was troubled frequently with convulſive motions of the arms and eyes; and toſſes

the head from one ſide to the other on the pillow, frequently moaning, but ſeems to know his brother and ſiſter. The pupils are not enlarged. The pulſe is 140 in a minute.

The *calomel* was continued. The head was ſhaved, and a bliſter applied to it.

Jan. 4. Pulſe 126, and regular; the ſymptoms continue much the ſame; has had three ſtools.

Jan. 5. P. 120, and hard; had three ſtools; is feveriſh, and throws his head about much more violently; the eyes appear dim and more heavy, but the pupils do not ſeem enlarged; nor has he any *ſtrabiſmus*; he takes nouriſhment; frequently ſcreams out, as if in great pain, without pointing to the ſeat of it.

The draughts were repeated, with the addition of two drops of thebaic tincture in the evening.

Jan. 6. P. 120. Is ſenſible; takes nouriſhment; does not throw his arms about as heretofore; the tongue is moiſt; ſuddenly diſcharged a large quantity of water from the eyes: had two ſtools.

The draughts were continued.

Jan. 7. P. 112. Paſſed an uncommon quantity of urine, and ſeemed every way mending.

From this time to the 12th, he took only two grains of *calomel* a day: at this period, he left off medicine, and gradually recovered.

CASE V.

FROM the ſucceſs attending the uſe of *mercury*, and the application of bliſters, in ſome of the preceding caſes, I began to entertain a favourable opinion of theſe remedies in the *Hydrocephalus Internus*;

nus; but the following inſtance, which occurred ſince I wrote the preceding relations, tends to invalidate the efficacy of theſe remedies in this diſeaſe. As it is by a ſeries of facts faithfully delivered, that the powers of medicines can be juſtly appreciated, I ſhall give the following hiſtory from the minutes daily made at the bedſide of the patient.

Elizabeth Bell, a child five years old, is the ſubject of the preſent eſſay. She had lately the *Pertuſſis*, and there are ſtill ſome remains of cough, though very ſlight. She has occaſionally had, for the laſt month, an head-ach, but it has neither confined her from ſchool, nor prevented her from enjoying her uſual play: for the two days paſt, ſhe has complained of more troubleſome head-ach: the toes and fingers are drawn inwards by ſpaſmodic contractions: ſhe has vomited once to-day; the pulſe is 112 in a minute.

I ordered one grain of *calomel* to be taken twice a day.

April 7. Has frequent convulſive motions of the limbs; and the contractions of the toes and fingers ſtill continue; ſees diſtinctly, and the pupils of the eyes do not appear to be enlarged; the pulſe is ſo irregular, as to prevent its frequency from being counted: keeps one hand almoſt conſtantly upon the forehead; and complains of pain of the head; body is regular. Ordered a grain of *calomel* three times a day, in a mucilage of *gum tragacanth*.

April 8. Has not had the convulſive motions; moans frequently in a mournful tone, and keeps the hand upon the forehead; ſleeps ſufficiently; has not had any ſtool: the pupils appear in a natural ſtate; the pulſe is very irregular, ſometimes running very rapidly, and then ſlowly; and theſe variations happen about every three minutes; frequently picks the noſe, from whence it has bled a little.

I ordered the head to be ſhaved; and frequently bathed with lukewarm vinegar and water.

The

The ſame quantity of *calomel* was continued.

April 9. The pulſe beats ſlower, but is ſtill intermitting; no convulſive motions have returned; and the moaning is leſs frequent; but a ſtupor continues, which the mother obſerves is preciſely a week ſince its commencement; has had a copious ſtool, by the aid of a clyſter; vomited in the night ſome foul green matter, ſtreaked with a little blood; paſſed an unuſual quantity of urine. Continued a grain of *calomel* three times a day.

April 10. The pulſe, which is weak, intermits leſs, but the moaning has augmented; has a frowning of the forehead, though naturally poſſeſſing the moſt pleaſing features; continues to diſcharge a large proportion of urine, and had ſome ſtools; had laſt night a violent convulſive fit. A bliſter was applied upon the head, and the *calomel* was repeated.

April

April 11. Continues to paſs a large quantity of urine; the pulſe is regular, and beats 120 ſtrokes in a minute.

The *calomel* was continued; and, as occaſion required it, a ſolutive clyſter was exhibited.

April 12. The pulſe continues regular, but makes 140 pulſations in a minute; the patient is hot, with a fluſhing of the face; has had very little reſt; appears ſenſible; paſſes much limpid urine, and ſometimes involuntary for the firſt time; continues moaning, with its hand to the forehead; had a little ſquinting yeſterday, and to-day it is more obvious; but the pupils do not appear dilated.

The *calomel* was continued, with two drops of thebaic tincture each time.

April 13. The pulſe is regular, beating 118 times in a minute; has ſlept a good deal, and has had two offenſive ſtools.

The

The *calomel* was continued, and one drop of thebaic tincture with each dose. The blister on the head discharges freely.

April 14. Squints very little to-day; the pulse is 120; has had two stools; hitherto has taken plenty of nourishment, but refuses almost every thing to-day; the breath has an offensive smell, and there is some soreness of the mouth.

Instead of *calomel*, an infusion of Peruvian bark was substituted.

April 15. The pulse is regular, and beats 140 strokes in a minute; has had a violent convulsive fit; the eyes roll about wildly, without *strabismus*; and the patient does not appear to see.

The bark was omitted, and the same quantity of *calomel* again administered.

April 16. The pulse is 150; the pupils do not appear enlarged, nor is there any squinting; has had another convulsive fit; sweats

ſweats profuſely; conſtantly leans the head forwards, the forehead frowning.

Seven grains of *mercurius alcalizatus* were ordered to be given three times a day.

April 18. Could not attend the child on the 17th, though the medicine was repeated. To-day the pulſe beats 140 with regularity; the pupils are now dilated for the firſt time, without any *ſtrabiſmus*; has not ſpoken for two days paſt, but to-day eagerly cried out for "*ſomething to eat*," and took much liquid nouriſhment; diſcharges much urine; moans a little; and every now and then has convulſive motions of the arms and legs, with faint ſhrieks.

The medicine was continued.

April 19. Died to-day, and on the next, the head was opened in my preſence, by my friend, W. Norris, Surgeon to the General-Diſpenſary. We found about five or ſix ounces of water in the ventricles of the brain, and no other appearance of diſeaſe.

It

It certainly may be doubted, whether the Cafes I have related, particularly the third[m], were really the difeafe fufpected; diffections, however, evince, that the *Hydrocephalus* frequently occurs, and is very rarely cured; this may be an apology for offering the foregoing defultory obfervations, as the fymptoms I have defcribed, whatever may really have been their caufes, are relieved by *mercury*, and blifters, more certainly, than by any other means I am acquainted with; and an encouragement to fuch a practice is, the fafety of giving this mineral to children, who will bear twice as much of it, without *ptyalifm*, as an athletic perfon can.

Although this difeafe is not reftricted to any age, as I am convinced by diffections; yet it moft generally prevails in children, which, probably, the greater laxity of their

[m] My fufpicions refpecting this cafe, were more excited on account of the particular form of the head, which is frequently obferved in *Hydrocephalics*. It is ufually round in its whole bulk, and comparatively broad; with a prominent or broad forehead; a flattened *apex*; and the *bregma* large.

folids

ſolids, and the larger proportion of fluids, in childhood, may conduce to the frequency of the diſeaſe. May not, likewiſe, the uſual mode of nurſing, contribute to the frequency of it? Thoſe have been reputed the beſt nurſes, who have ſhook and toſſed the children under their care, with the greateſt jactation, which, conſidering the tender fabrics upon whom it is performed, may produce more harm than good. The manner of children ſleeping on the lap, with the head ſometimes hanging down for hours, would in grown people occaſion painful affections of it; and why not to infants, whoſe brain is more vaſcular?

Children, regardleſs of the future effects of exerciſe, are apt to place themſelves in very improper attitudes, ſometimes ſtanding on their heads, at others, exerting themſelves, who ſhall hang the longeſt over rails, with the head downwards, in which poſition I have often counted ſeveral on one rail; beſides the violent exertions of running, leaping, &c. I once knew a parent, fond of an only child, who uſed to

amuſe himſelf with letting the tender object creep down his thighs and legs, and twiſting underneath, then crawl up again: this child died of the *Hydrocephalus*. Similar inſtances, ſucceeded by the ſame fatal diſeaſe, I could enumerate here; but theſe ſuggeſtions are only introduced, as cautions againſt exerciſes of children, which oblige them to hang down the head for a length of time, and which may be ſuſpected to excite turgeſcence of the brain.

ARTICLE X.

Some Account of an unuſual Exfoliation of the Cranium: In a Letter to J. C. LETTSOM, M. D. &c. *from Sir* THOMAS GERY CULLUM, *Bart. St. Edmundſbury.*

Read May 1, 1786.

I HAVE encloſed you a ſketch of a very large Exfoliation of the Cranium, the hiſtory of which is as follows:

In the year 1779, a poor lad, about ſeven years old, in the abſence of his mother, it is ſuppoſed, was taken in a fit, and fell into the fire, where he might remain, as far as can be gueſſed, a quarter of an hour, till his mother returned. A year elapſed before the *eſchar* of the burn, he received at that time on his head, digeſted off, which then left the bone (as here ſketched) quite bare; in about three months afterwards, the denuded bone was caſt off, and one large ſore, covered with granulations of fleſh from the *dura mater*, then preſented itſelf: in about ſix months after the Exfoliation took place, the ſore was about the ſize of the top of a ſmall tea-cup, and in a healing ſtate; and the boy in perfect health, ſtrength, and ſenſes.

The cure of the above extraordinary caſe owes every thing to nature, having fallen under the care of one the moſt illiterate and unſkilful.

The Exfoliation, you ſee, conſiſts of the *whole* (both tables) of the *os parietale* on

one ſide, and part of the other, and a portion of the *os occipitis.* I have got a caſt of the bone in plaſter of Paris; neither perſuaſions, or money, would tempt the mother of the boy to let me have her *child's ſkull.*

In the autumn of 1785, I ſaw the lad from whence this Exfoliation was taken: very little oſſification had been produced by nature towards the reparation of the injury; there is ſtill a ſore, of the ſize of a crown piece, from which there is a large diſcharge; the edges of the *os frontis,* the remaining parts of one parietal bone, and the *os occipitis,* are at too conſiderable a diſtance for oſſifications to ſhoot out and unite; and could nature ever repair this loſs of bone, ſhe could not do it, I think, till a *cicatrix* were formed: it is obſervable in compound fractures, that the bone acquires but little ſtrength, whilſt the wound continues open, or there is much diſcharge.

No Surgeon ever attended this boy; the mother alone dreſſes the ſore, and you may

 depend

depend upon it, uſes greaſy unguents, not in a ſmall quantity, which makes every thing dirty, and promotes a *fungus*, and a large diſcharge. I once offered my ſervices to cure the boy, without being accepted.

January 10, 1786.

ARTICLE XI.

Caſe of a ſingular Enlargement of the Heart, by THOMAS OGLE, *Surgeon to the* MIDDLESEX-DISPENSARY, *and* F.M.S.

Read September 26, 1785.

JOHN JUDD, twelve years of age, was received into the Middleſex-Diſpenſary in December 1783.

He complained of pain and unuſual oppreſſion about the ſtomach and cheſt; which ſymptom was much increaſed by

eating ſolid food. His ſleep at nights was little and diſturbed; his breathing difficult; he had a conſtant cough, without expectoration. The left cavity of the *thorax* was evidently enlarged, the ribs projecting rather forwards. This projection was moſt evident about the ſixth, ſeventh, and eighth ribs; at which place, and near their greateſt curvature, was a ſtrong pulſation, extending, with an undulating motion, to the pit of the ſtomach: this was ſo ſtrong, as to be diſtinctly ſeen, even when covered by the waiſtcoat.

The lad traced theſe complaints to a fall, which he had met with a year before. He had then loſt the uſe of his limbs; and, though he had again recovered them, he had never been free from the pulſation at his ſtomach. His countenance was pale, and expreſſive of the greateſt anxiety; he ſighed frequently, and complained of his heart; he ſeemed conſcious, that no relief was to be expected, and that his death was near at hand.

His

His pulſe was weak, but neither quick nor irregular; his evacuations were good.

For the ſpace of a month, the lad's complaints gradually increaſed. The pulſation extended wider, and was more diſtinctly ſeen. His cough, and difficulty of breathing, became more troubleſome. He was unable to lie on the back, or right ſide. The painful ſenſation about his cheſt ſtill continued; it felt, he ſaid, as if his heart was rolling about like a great ball.

From the ſymptoms it was evident, that the heart, or *pericardium*, was the ſeat of the diſeaſe; and it was conjectured, that the latter contained water in it. This appeared more probable, from a ſudden ſwelling of the *abdomen*. About ſix weeks after the lad applied to the Diſpenſary, and immediately before this enlargement, he had a ſevere fall, which evidently haſtened his death. From that time he was confined to his bed; his pulſe became irregular, and ſo ſmall as ſcarcely to be felt; his belly increaſed rapidly; his pain was more in-

tolerable; and his extremities grew cold and œdematous. In this ſtate he remained about twenty-four hours, when he died.

On opening the *abdomen*, it was found to contain a large quantity of watery fluid. The inteſtines were inflated, and ſeemed preternaturally enlarged. The liver was much encreaſed in ſize, and of a ſchirrhous degree of hardneſs; when cut into, the knife ſeemed to grate, as if rubbing againſt ſand. The gall bladder was conſiderably diſtended with bile. The ſpleen was, like the liver, enlarged, and remarkably hard. The other *viſcera* appeared in a ſound ſtate.

In the *thorax* was contained ſome water, tinged with blood; the quantity, however, was not conſiderable. The lungs adhered, in ſome places, to the ribs and diaphragm, but were, in other reſpects, ſound. They were compreſſed into a ſmall compaſs by the *pericardium*. On removing this, together with the heart, out of the body, there were found marks of inflammation on the ſurface of the heart, about which the

the *pericardium* adhered ſo firmly, as to be ſeparated by no force. The heart in this ſtate was enlarged to three times its natural bulk, and appeared like an unformed maſs of fleſh. The enlargement ſeemed to conſiſt entirely in the thickening of the muſcular ſubſtance of the heart, as the cavities appeared of their natural dimenſions, and free from diſeaſe.

Theſe were the principal appearances on diſſection.

It is evident, that the ſymptoms attending this diſeaſe, are ſufficiently accounted for by the inflammation and immenſe ſize of the heart. It is alſo clear, that it was one of thoſe unfortunate caſes, where medicine can only be ſerviceable in alleviating ſymptoms, and rendering death leſs painful.

ARTICLE

ARTICLE XII.

A fatal Case of a morbid Enlargement of the Prostate Gland, with a singular Appearance in the Bladder, &c. In a Letter to J. C. Lettsom, M. D. &c. *by* Anthony Fothergill, M.D. F.R.S. *and* C. M. S.

Read May 1, 1786.

Dear Sir,

THE following pages contain the history of a remarkable Case, which my late worthy friend, Dr. Hunter, a short time before his death, expressed a wish, might be published for the good of society. If you think it suitable to your present design, it is entirely at your service.

W. C——, Esq. April 23, 1777, aged sixty-four, had for several years past, at intervals, laboured under great difficulty of

of urine, ſometimes amounting to a ſuppreſſion. Theſe ſymptoms were generally exaſperated by the uſe of acids, or riding on horſeback, when the urine would ſuddenly appear dark-coloured, or bloody, attended with pain in the loins, and parts adjacent. At length, he could only paſs it when in a *ſtanding poſture*; the urine high-coloured, in ſmall quantity, and diſcharged by drops involuntarily. Great pain and diſtention about two inches below the navel, attended with low fever, intenſe thirſt, parched tongue, pallid countenance, flatulency, and conſtipation; pulſe from 89 to 96 and upwards, low, unequal, and frequently intermitting, accompanied with involuntary twitchings, anxiety, and delirium.

The introduction of the *catheter* having lately been tried in vain, he could by no entreaties be now prevailed on to undergo a repetition of that operation, though the ſymptoms ſtrongly indicated a permanent obſtructing cauſe in the urinary paſſage. Yet was there no apparent venereal ſymptom,

ſymptom, no ſtone or gravel ever voided, nor any apparent tendency to ſcrophulous, or glandular obſtructions, to which the diſeaſe could be fairly attributed. A conſultation was held with two other Phyſicians. Mercurials, purgatives, and diuretics proved fruitleſs. The caſe was then ſtated to Dr. Hunter, who immediately returned the following very ſatisfactory anſwer.

"Dear Sir,

"YOUR account of Mr. C——'s deplorable caſe, and the means you have uſed for his relief, gives me a perfect confidence in your judgment and attention; and therefore my beſt advice muſt be, that your patient ſhould be directed in every thing, rather by you, who ſee him, than by any Phyſician in England who has not that advantage. In moſt caſes, indeed, and eſpecially in this, it is our duty *to know as much of the nature of the complaint as poſſible*. You have urged, and he has declined, the proper examination. I muſt entreat him to yield to our anxious ſolicitation. No doubt there is a ſtone, or gravel

vel—but I ſuſpect there is ſomething beſides, which may be eaſily diſcovered, without giving him pain: I have often ſeen the ſame ſort of ſymptoms in elderly men, ariſing from an indurated and enlarged proſtate. This can be certainly known by paſſing a finger up the *rectum.* The proſtate may ſometimes be found to fill up the whole cavity of the *pelvis*, and, in that caſe, the bladder lies altogether above the *oſſa pubis*, ſo that it is difficult to reach it with the *catheter*, both on account of its diſtance, and of the angle which the *urethra* makes with the neck of the bladder. Yet a *good, ſilver, flexible catheter* (which might be ſent from London, if your Surgeon has not one) would find the way, with very little pain; and it would give immediate eaſe, if it be the diſtended bladder (as I ſuſpect it is) which gives the pain and diſtention below the navel.

" There may, likewiſe, be a ſtone fixed in the *urethra*, which would be diſcovered by the *catheter*. I cannot bear the thought of his abſolutely refuſing a trial of what is

at

at the ſame time ſo harmleſs, and ſo likely to give him relief.

" This is all I have to ſay. You are ſo fully poſſeſſed of the methods of ſoothing and palliating ſymptoms, that I think you want only a ſkilful examination. I wiſh your patient the bleſſing of eaſe and health, and you the comfort of having made him well. I am ever,

" Dear Sir, &c. &c.

" WILLIAM HUNTER."

Agreeable to Dr. Hunter's advice, we renewed our ſolicitation, but he remained determined againſt undergoing the uſe of the *catheter*, or any other operation; nor indeed could they now be urged with any proſpect of ſucceſs. Mild laxatives, anodynes, and demulcents, tended to mitigate his ſufferings, but his ſtrength being totally exhauſted, death ſoon happily releaſed him from his calamities. The next day his body was opened by an able Surgeon, who favoured me with the following particulars,

as I could by no means attend in perſon, being diſtant upwards of twenty miles from the place.

" On opening the cavity of the *abdomen*, the bladder was found adhering to the *peritonæum* before, and to the *omentum* and inteſtines at its *fundus*, or upper part, which extended ſome way above the *umbilicus*. The inteſtines, likewiſe, adhered to the *peritonæum* at each ſide of the *abdomen*.

" The bladder contained five pints of urine, which being mixed with a mucilaginous matter, gave it the appearance of whey; but after ſtanding ſome time, the *mucus* ſeparated in great quantity, and fell to the bottom of the veſſel. The urine did not coagulate by heat, or leave any thing particular after evaporation, more than common urine.

" The coats of the bladder exhibited marks of diſeaſe; the internal being partly abraded, the external coat conſiderably thickened, and irregularly diſtended; the muſcular

muſcular fibres having loſt their uſual appearance, were become white, and preternaturally enlarged, like bundles of ſtraw, eſpecially on the inſide, near the neck of the bladder. But what was ſtill more ſingular, the bladder was *divided in the middle by a membrane running acroſs it*, which was perforated by a hole large enough to admit a little finger, ſo that when the upper part was emptied, it was immediately filled again by preſſing the lower part next the *pubis*, which forced the water through the aperture in the *ſeptum*. The proſtate gland was enlarged to *more* than the *bulk of an hen's egg*.

" There was no obſtruction diſcovered in any part of the *urethra*; but the obſtacle to the *catheter*, both before and after death, muſt have been owing to the great diſtention of the bladder, and enlargement of the proſtate gland; both which contributed to form ſo acute an angle in the *urethra*, as not to accommodate the inſtrument.

The

"The *ureters* were both enlarged to
"twice their natural ſize. No calculous
"concretions were found either in the
"bladder, *ureters*, or *pelvis* of the kidneys,
"nor any other morbid appearance in the
"abdominal *viſcera*, except what has been
"mentioned. The contents of the *thorax*,
"he adds, were not examined."

The remarks which have occurred to me from duly conſidering the preceding hiſtory, are chiefly as follow:

1ſt. The enlargement of the proſtate gland, and the other morbid appearances in the bladder, together with its adheſions to the adjacent parts, denote a conſiderable degree of inflammation to have accompanied the firſt ſtage of the diſeaſe: and alſo explain the cauſe of the pain of the loins, and other ſymptoms which greatly reſembled thoſe of the nephritic kind. The inflammatory diſpoſition which ſeems to have laid the foundation of the diſeaſe, probably gave riſe at the ſame time to the formation of that *ſingular appearance* of a *membranous*

partition, by producing at firſt a partial ſeparation of the internal coat of the bladder, which being gradually extended by the preſſure of the urine, at length formed a diſtinct cavity.

2d. The dilatation of the *ureters*, ſeems to have been a natural conſequence of the urine being accumulated in them, in the laſt ſtage of the illneſs. For the coats of the bladder when kept in a preternatural ſtate of diſtention, muſt compreſs the extremities of the *ureters* which paſs obliquely between them, and of courſe retard the deſcent of the urine into the bladder.

3d. It appears that where there is no previous local affection to point out the nature of this diſeaſe, it is ſcarcely diſtinguiſhable from a calculous complaint, even in its advanced ſtate, eſpecially when the patient will not ſubmit to the neceſſary examination, ſo properly inſiſted on by Dr. Hunter, and which ought never to be neglected, where there is the leaſt doubt or ſuſpicion.

ſuſpicion. Whenever there is an *obſtinate* obſtruction of urine in aged people, attended with *extreme difficulty* of introducing the *catheter*, and an inability of diſcharging urine, unleſs in an *erect poſture* of the body, it will afford a ſtrong preſumption that the diſeaſe proceeds from a conſiderable enlargement of the proſtate, as in the preceding caſe.

4th. In this deplorable ſituation, there can be no hopes of a complete cure, without diſperſing, or extirpating the morbid tumor, both which ſeem to be equally impracticable; nor can even temporary relief be adminiſtered without firſt emptying the diſtended bladder. Every likely means therefore to accompliſh this ought to be attempted.

Might not an inverted poſition of the body during the operation, tend to diminiſh the preſſure of the urine upon the diſeaſed part? And might not this alſo afford the operator an opportunity of reducing the diſtended bladder nearer to its

natural ſituation, and thereby facilitate the introduction of the *catheter*?

5th. When this, and other reſources fail, and where the patient has reſolution to undergo a doubtful operation, it perhaps may be adviſeable to puncture the bladder through the *rectum*, and thus diſcharge the urine, provided this can be performed without wounding the ſchirrous gland, which might indeed diſpoſe it to contract a cancerous diſpoſition.

6th. If the diſeaſe could with certainty be diſtinguiſhed at the beginning, or even before the *critical period* when the tumor changes from the *inflammatory* to the *indurated* ſtate, might not a kindly reſolution be reaſonably expected from a courſe of the ſaline purging waters of Scarborough, or Cheltenham, or of mild mercurials, and antimonials aſſiſted by ſuitable evacuations, and a ſtrict antiphlogiſtic regimen?

I am, with the greateſt reſpect, dear ſir, your very humble ſervant,

A. FOTHERGILL.

Bath,
Mar. 26, 1786.

ARTICLE XIII.

An extraordinary Case of Delivery: By JAMES SHAW, *Surgeon*, F.M.S.

Read February 15, 1786.

ELIZABETH, the wife of Daniel Barker, a Shoemaker, having in October 1766, ſpent the evening with ſome degree of feſtivity to the honour of St. Criſpin their tutelar ſaint, though not at all to exceed the bounds of ſobriety; about twelve, the company not being gone, ſhe was obliged to be carried up to bed ſuddenly, perceiving a violent weight and fulneſs protrude through the *pudendum*, as though the greateſt bulk of her child was born. Her midwife was ſent for, who came to her at two o'clock, and found ſhe had regular pains, which inſtead of dilating the *os uteri* rather conſtringed it, and very powerfully threatened to puſh down the

whole *uterus* and its contents with it. I was called in about ſix o'clock the ſame morning; I found the patient faint, low, and very much terrified, but the pulſe not full or very quick; on examining I thought the whole *vagina* was turned outward, and left the hairy ſcalp of the *fœtus* in the centre of a very large tumor; being now compelled to uncover the parts, I was aſtoniſhed to ſee the *os uteri* dilated about an inch and a half, or two inches in diameter, exceedingly tenſe though thick, of a deep red colour, with a view of the hairy ſcalp; the whole ſurface of the tumor of the ſame deep red, and very turgid; the *labia*, great part of the *nates*, and even the *mons veneris* were out of ſight by this extraordinary tumor. She had had many pains, and while I ſat with her ſhe had one nearly every five minutes, when I found the parts to puſh ſtill outwards and a kind of rotatory motion in the head within the *os uteri*, but not in the leaſt to further dilate it.

I attempted gradually to puſh up the head, but I found my efforts to aggravate the ſymptoms of faintneſs, and give her intolerable pain; the midwife too had tried that ſufficiently. It made me exceedingly unhappy, the ſurface of the *os uteri* beginning to appear livid!

I told the midwife I would endeavour to ſee Dr. Mackenzie, and would call again as ſoon as convenient; on telling him the caſe, he pronounced that ſhe muſt die, deſired me to ſend her an opiate and ſee her again in the evening; but to be very cautious in handling the parts. About ſeven o'clock in the evening I went to ſee her, and found her pulſe ſinking, with clammy ſweats; the pains as often, but not ſo ſtrong. The appearance more livid with the *epithelia* in many parts abraded, where there alſo appeared ſeveral limpid drops of *ſerum* like very ſmall drops of dew, which I attributed to the turgidity of the parts during each pain.

While I fat by ruminating in my thoughts what to do, I with difficulty paffed my finger by the *anus* to the edge of the *perinæum*, which I found very ftrongly girting the tumor; however, I got my finger within it, and found it ftill capable of further diftention; I then carried the fore finger of my other hand to it, and endeavoured with them both carefully to draw the *perinæum* back; and as I did that, I thought the tumour feemed gradually to recede, and on proceeding with the gentleft means at firft, and drawing my fore fingers a little from each other, and ftill pulling the *perinæum* back, I at length effected a complete reduction of the tumor, when it was about nine o'clock at night. I then went home and ordered her twenty drops of *thebaic* tincture with ℥ſs of cordial confection, firft begging the midwife, a very intelligent careful woman, to fit by her with her hand to the parts, efpecially when her pains came on, to prevent a return of the tumor; and requefted fhe would not attempt to dilate with her fingers the *os internum*. She after this flept two hours,

when

when her pains returned, and at or near four in the morning, ſhe was happily delivered of a fine boy, and had not one bad ſymptom during her lying-in.

She had had four children before this, has had two ſince, and is very healthy, except a ſlight bearing down, as ſhe calls it, after working very hard.

ARTICLE XIV.

An Account of two Caſes of a Bronchocele, wherein the Uſe of burnt Sponge appeared to have a very conſiderable Effect: By TIMOTHY LANE, F. R. S. *and Fellow of the* MEDICAL SOCIETY.

Read June 11, 1776.

IN the month of January 1764, a young lady, aged about ſeventeen, applied to me for a Bronchocele, which ſhe had perceived

ceived growing about twelve months. The following powders and mixture were ordered.

℞ *Pulv. Milleped.* ℈j. *Cinnab. Antim.* ℈ſs. *Mer. Alcaliz. gr.* iij. *fiat Pulvis Nocte et Mane ſumendus.*

℞ *Tartar ſolub.* ʒiſs. *Aq. puræ*, ℥vj. *Tinct. Stomach.* ℥j. *Syr. Croci*, ʒij. *Miſce ſumat Coch. j. c. ſing. Pulv. ſuperbibend. Coch. iij.*

Theſe medicines proving too ſolutive, the *Tart. ſolub.* was omitted, and the powders were continued rather leſs than three weeks, without any apparent benefit; when I was informed (by whom I do not remember) that a lozenge of burnt ſponge placed under the tongue at night, going to bed, and remaining till diſſolved, had been of uſe. The informer being a perſon of ſufficient credit, induced me to try the following lozenges.

℞ *Spong. Uſt.* ʒi. *Syr. Simp. q. ſ. fiat Troch. vj.*

Theſe

Theſe were continued leſs than a month, when the tumor quite diſappeared, and has not returned ſince, now twelve years.

A queſtion naturally ariſing from the above, is, whether the previous medicines, or the lozenges, ſucceeded; for though the decreaſe of the tumor did not appear, manifeſtly, to have taken place, till after the uſe of the lozenges; yet, the former medicines might have been effectual.

After this, two perſons applied to me, in which neither medicines nor lozenges ſeemed to ſucceed effectually: one a ſervant, who was rather better for them; but ſome circumſtance (probably leaving her place) prevented her continuing their uſe.

A young lady, in a family where I was viſiting, having a Bronchocele, where the tumor was on the right ſide of the neck only, I propoſed ſome lozenges to put under the tongue, which ſhe conſented to. At firſt ſhe found them troubleſome, from the unuſual ſenſation in her

her mouth, but in a ſhort time they were no inconvenience, ſhe going to ſleep, as uſual, before they were diſſolved. In about a month ſhe ſeemed apparently relieved, and is now well, having continued them about four months. This young lady was about fifteen years of age, and had the complaint about two years before I ſaw her. After uſing the lozenges about three weeks, ſhe complained of head-ach; ſuppoſing it to ariſe from coſtiveneſs, I gave ſome *Infuſ. Sennæ*, which relieved her. She has taken no medicine ſince, ſo that we may here properly conſider a real effect to have ariſen from the lozenges.

Whether the ſame lozenges uſed in the day-time, would not do as well as at night, ſome of the gentlemen of this ſociety may have an opportunity of inquiring.

The facts are related with ſimplicity, and may be new to ſome perſons, while others, from their obſervations, may favour the ſociety with a further account

of

of the ſame diſorder, and its method of cure; in which they will promote the intention of the writer and of the Society.

Alderſgate-Street,
June 10, 1776.

ARTICLE XV.

Caſe of Rheumatiſm, cured by Electricity: *By* ROBERT SHERSON, F. M. S.

Read June 26, 1777.

A LADY about fifty years old, the mother of many children, of a very nervous, irritable, and ſomewhat ſcorbutic habit, ſubject to ſpaſms of the ſtomach, and erratic pains in the limbs (which ſhe called Gout). She was often troubled with ſevere head-aches, ſo as to be conſidered conſtitutional.

This

This lady complained to me, about three years ago, of a violent and conſtant acute pain in her right arm, which had held her for above a month, about the tendinous inſertion of the *Deltoid* muſcle; whenever ſhe endeavoured to extend or elevate it, ſhe ſuffered moſt exquiſite torture; no inflammation or tumefaction was obſerved, nor was there pain from preſſure. I conceived this complaint of the rheumatic kind, and had recourſe to the alterative plan: ſmall doſes of *calomel, ſulph. antim. precip.* with *opium* and *gum guaiac.* were adminiſtered at bed-time; alſo neutral ſalts in *decoct. lign. guaiac. ter in die.*

Theſe means were purſued about a week, and the pains were ſuppoſed to be alleviated: however, ſome of the lady's friends ſeemed uneaſy, becauſe ſhe was not immediately well; on which, an eminent phyſician was conſulted, who directed the *extr. cicutæ*, the doſe to be increaſed *gradatim*, till our patient took ʒj *ſingulis diebus*. She perſevered in this courſe for ſix months, her complaints gradually becoming

ing worſe. From this tedious and unſucceſsful trial, ſhe became impatient; her phyſician having ſignified her diſorder was the effect of a latent cancerated *humor*; ſhe had therefore no chance but perſeverance. Under theſe unhappy circumſtances, ſhe determined to diſcontinue her medicine; but I continued to viſit her occaſionally, at the requeſt of her friends.—Finding ſhe had no hopes from medicine, I expreſſed my deſire ſhe would try the effect of electricity; but recommended her firſt to take the opinion of her phyſician. She would not ſee the gentleman ſhe had already conſulted; but applied to another, equally eminent in the profeſſion, who very much recommended the trial: at the end of the firſt week there were evident marks of amendment, by abatement of pain, and a tranquillity of mind, which confirmed the advantage already gained. The undertaking was as fortunate as could be wiſhed, though the electrical means were not applied after the preſent improved manner, but in gentle ſhocks: through this method the lady was recovered in

about three weeks, from the moſt diſtreſsful ſituation imaginable, and has been free from the pain of her arm ever ſince. I beg leave alſo to remark, her general health is improved, and her head-aches are leſs frequent.

Theſe circumſtances, and other caſes I have ſeen, lead me to conſider, how far we ought to rely on the caſes given by Dr. Storck; for De Haen's Epiſtle *de Cicuta* denies ſuch happy conſequences having ever happened, as are related by the Doctor.

I ſhould be happy to ſee the opinion of different gentlemen, well verſed in practical electricity, how far the various obſervations they have made thereon, ſeems an acquiſition in Phyſic; for I am ſorry to find ſome amongſt my medical friends, that have great doubts as to the efficacy of electricity, in any diſorder; but I am convinced I have ſeen it ſingularly beneficial in ſpaſms and various obſtructions, particularly of the *menſes*.

ARTICLE XVI.

A Caſe of the Stone, in the Urinary Bladder, ſucceſsfully treated; by giving Water impregnated with fixed Air, by Means of Salt of Tartar, and weak Spirit of Vitriol: By Mr. JOHN HARRISON, *late Surgeon at* EPSOM, *now of* MOUNT-STREET, BERKELEY-SQUARE. *Communicated by* NATHANIEL HULME, M. D. &c.

Read March 20, 1786.

MR. John Hobman, of Epſom, late Dantzick Merchant, was the ſubject of this caſe. He was a well-made ſtrong man, of an excellent conſtitution, and before this complaint could walk ten or twelve miles a day with great eaſe to himſelf, though at the advanced age of ſeventy-four or five years.

He had been afflicted with calculous ſymptoms about two years, as nearly as I

can remember, before I was consulted; and was so fully convinced in his own mind of having a stone, that he used to express himself by saying, "That he felt "the weight of it pressing on the neck of "the bladder."

He never had a severe fit till the month of January 1779, when he was seized with a suppression of urine, to relieve which I was obliged to pass the catheter, in order to draw off his water.

The instrument struck against the stone in so remarkable a manner as to affect both the ear and the touch very singularly, and rather surprised me, notwithstanding I had been previously acquainted by him that there was certainly a stone in the bladder. Its magnitude I supposed to have been, from the sound and touch, about the size of a small pullet's egg, and rather globular. A few days afterwards I was obliged to introduce the catheter again to bring away the water, and found the stone pressing o the neck of the bladder, which

which receded the moment that the inſtrument touched it, and then a quantity of paliſh urine ran freely off.

From the almoſt continual irritation of the ſtone, and Mr. Hobman's advanced age, his caſe was by ſome deemed fatal. Neverthele ſs, having paid great attention to him, I was of a different opinion; apprehending from his native ſtrength, that he had *ſtamina* equal to ſupport him ſome years longer; a ſufficient reaſon I thought to juſtify the trial of ſome lithontriptic medicine.

With this view I propoſed a *lixivium* to be given, as prepared by Mr. Lane, an ingenious apothecary in Alderſgate-Street. The phyſician who was conſulted, preferred the uſe of water impregnated with fixed air, by means of ſalt of tartar, and weak ſpirit of vitriol, as recommended by Dr. Hulme in a Treatiſe publiſhed in the year 1778, intituled, " A ſafe and eaſy Remedy, propoſed for the Relief of the Stone and Gravel, the Scurvy, Gout, &c."

"&c." but with which I was not at that time acquainted.

This lithontriptic medicine was given twice a day, and after our patient had taken it about ſeven or eight weeks, to the beſt of my recollection, he was ſuddenly relieved one evening, by a large diſcharge of cretaceous, or rather ſtony matter in the urine, without any pain or inconvenience. It ran from him during the greater part of the night involuntarily, while he was aſleep as well as when he was awake. It ſoaked through the bed, and ſacking of the bedſtead, and ran upon the floor, ſtaining it with a whitiſh gray hue, or rather with the colour of free-ſtone. The powder left behind upon the floor, and in the chamber-pot, was almoſt as fine as if it had been levigated. He never obſerved any calculous matter to be voided in his urine before the uſe of this medicine, and the whole of it was diſcharged in the ſpace of five or ſix days.

From

From this time all ſymptoms of a ſtone in the bladder diſappeared, and he recovered his ſtrength much quicker than people in general do at his time of life; but was not able to walk ſo well afterwards as before; the fit ſeeming to have weakened his feet. I adviſed him to perſevere in the uſe of the lithontriptic, leſt ſome fragment of the calculus might remain, which he did for two or three months longer.

In January 1781, he complained of coſtiveneſs and piles, and that his urine did not paſs ſo freely as before, but rather with a contracted ſtream. Some lenitive electuary with *ſulph. præcipit.* were preſcribed; and I recommended him to uſe the medicine of Dr. Hulme again, but could not prevail upon him. By means of the above electuary, and *ol. ricin.* he ſeemed to be relieved. During the year 1782, he took but very little medicine, and his complaints were generally as laſt mentioned.

In 1783, beſides an habitual coſtiveneſs, he was frequently ſeized with an hæmor-

rhoidal flux while at ſtool, and voided at different times large quantities of blood. Theſe were attended with a frequent *teneſmus*, and retention of urine; which induced me to think that ſome part of the ſtone remained ſtill undiſſolved, and therefore I once more entreated him to begin with the lithontriptic, but in vain.

On the 28th of October 1784, his complaints becoming almoſt inſupportable, he ſent for me, and I adviſed the immediate uſe of an emollient *enema* to be thrown up, twice a day, with a view to foment the parts, and empty the inteſtines.

October 29. He could at this time hardly paſs any urine; but by throwing up an *enema*, it enabled him by dribblets to make about a pint.

October 30. By ſitting over the ſteam of hot water, put into a cloſeſtool-pan and frequently renewed, for the ſpace of an hour, his urine dripped ſlowly away, but he paſſed a very indifferent night.

October

October 31. This day there was almost a total suppression of urine; but he had three stools without assistance.

November 1. He informed me that he had made a little urine in the night; but that it was evacuated with the greatest difficulty. On examination I found that there was an enlargement of the prostate gland. An emollient injection was administered in the evening, and an anodyne draught was given at bed-time.

November 2. In the evening he had a total suppression of urine; and an *enema* was thrown up, which procured him three or four stools.

November 3. About four o'clock in the morning I was called to him, and on my arrival informed that he could pass no urine. As soon as a warm bath could be prepared, he was put into it, and in a few minutes after he had been immersed, he voided about a pint of water. When he came out of the bath he was put into a

warm bed, and a cardiac anodyne draught was given, which procured him four hours good ſleep. When he awoke, he made more water. An emulſion of *ol. ricin.* was occaſionally adminiſtered, which kept the body gently open.

November 4. A difficulty of urine continuing, I endeavoured to paſs the catheter, as the frequent uſe of the warm bath occaſioned faintneſs, but was prevented by a ſtricture in the *urethra.*

November 5. His urine came away of itſelf, ſo as to occaſion no further uneaſineſs, a general atony now prevailed, and he was attacked with a violent *diarrhœa.*

November 6. From this day to the 12th (on which he expired) he daily grew worſe, and the *diarrhœa* reſiſted every effort made uſe of to check or ſuppreſs it.

The day after his death, I was permitted to inſpect the body. The urinary bladder contained

contained about a quart of water, but not the leaſt calculous concretion was found therein. Its coats were rather thinner and ſofter than uſual, and the innermoſt one had put on a dark gangrenous appearance. The neck of the bladder was much inflamed, particularly on its external part; and alſo the whole length of the *rectum.* The kidnies were ſound, and without any ſtone or gravel. The ureters were ſomewhat enlarged. In the *urethra* was found a ſtricture, ſeemingly cauſed by inflammation, and the preſſure of the proſtate gland, which was indurated and enlarged. All the other *viſcera* were perfectly ſound, and I never ſaw a finer ſubject opened.

ARTICLE

ARTICLE XVII.

A Caſe of Hydrops Ovarii and Aſcites: By WILLIAM FRENCH, *Surgeon, and* F.M.S.

Read November 19, 1776.

MRS. Procter, of Red-Lion-Paſſage, in the pariſh of St. George the Martyr, about the time of ceſſation of her menſes, laboured under a variety of complaints, which, after many years continuance, terminated in a ſwelling of the abdomen.

She was preſcribed for by many gentlemen of the faculty, without the leaſt ſucceſs.

As the tumor increaſed, her inclination for food alſo increaſed; and at length ſhe became ſo clamorous, that ſhe never was eaſy but when taking nouriſhment.

She

She had a ſtrong prepoſſeſſion there was ſomething alive in her belly; and on declaring this to gentlemen of the faculty, who occaſionally viſited her, their minds were diverted from the proper cauſe of her complaint, and their compaſſion excited to provide her with the neceſſaries of life. Nine or ten years elapſed before the leaſt fluctuation was perceptible; at length, however, it was clearly felt, and the poor woman conſented to be tapped, as the only means of prolonging life; but ſhe died early in the morning of that day the operation was intended to have been performed.

Her body was opened by Mr. Langley, Surgeon, in the preſence of Mr. Taylor, her Apothecary, and myſelf. We firſt drew off about ſeven gallons of water, by means of a trocar; On dividing the *parietes* of the abdomen, a large ſubſtance preſented, extending from the *pelvis* to the diaphragm; this was found to be the right *ovarium*, divided into many cyſts, and containing a fluid of different degrees of inſpiſſation.

inſpiſſation. The abdominal *viſcera* appeared no otherwiſe diſeaſed, than what might reaſonably be expected from the quantity of extravaſated fluid. By the preſſure of the enlarged *ovarium*, the natural ſituation and form of the ſtomach was altered in ſuch manner that the *pylorus* was the moſt depending part of it, conſequently incapable of retaining the food ſhe received, a ſufficient length of time for the purpoſe of digeſtion. A certain degree of diſtention in the ſtomach is certainly neceſſary to create ſatiety; and as, in this patient's ſituation, that could not poſſibly take place, we may naturally conceive that whatever was received into that *viſcus*, paſſed immediately into the *duodenum*, and thence along the courſe of the inteſtines: theſe alſo having loſt their aſſimilating power, the abſorption through the lacteals muſt be very defective, and, perhaps, ſerve to explain the cauſe why the patient was conſtantly deſirous of food, and extremely languid during the interval between her meals.

Having

Having found sufficient cause for the suffering and death of the patient, we pursued our dissection no farther.

The flaccid state of the integuments of the abdomen, after discharging the fluid, and the extreme thickness of the cysts of the *ovarium*, would (in the living subject) have rendered a second perforation difficult to be performed; and, at best, nothing more could be expected than temporary relief.

N. B. This case is presented to the Medical Society for its singularity, more than for any practical inference to be drawn from it.

ARTICLE XVIII.

A Case of Angina Pectoris: By JOSEPH HOOPER, *Surgeon*, &c.

Read April 10, 1785.

AN eminent tradesman in the neighbourhood of this city, aged about forty-five years, of stature rather short, tending to corpulency, and short-necked, who accustomed himself to spend his convivial hours rather too freely, had, for three years past, been subject to a pain in his left side; which, however, was not so considerable as to claim much attention, or induce him to seek medical assistance, till about six months before he died, when, having caught cold upon a journey, it grew more troublesome, attended with a short dry cough, for which he was let blood, and took such medicines as generally afford relief under such symptoms, and

and from which, though he found ſome abatement of his complaints, ſo as to purſue his buſineſs, yet, in about a month after, the cough and pain increaſed to a degree beyond what he had hitherto felt, with an acute darting pain from his breaſt, quite through to his back, a conſiderable *dyſpnœa*, and feveriſh heat at times; his pulſe was hard and quick, though not full nor irregular. At this time he could not, without much difficulty, lie but on the left ſide: and found the eaſieſt poſture was ſitting with his body inclining forward, whilſt a gentle preſſure was made on the ſide affected. Exerciſe, or drinking any thing hot or pungent, increaſed his pain and difficulty in breathing, but bleeding and gentle eccoprotics, which were frequently repeated, generally afforded ſome benefit; and anodynes were now and then interpoſed to blunt the violence of his ſufferings. And, indeed, though two eminent Phyſicians of this city exerted their utmoſt for his relief, they could only procure him temporary truces, till, at length, his diſtreſs was ſo great that he could lie

no

no otherwiſe than on his back, bolſtered high with pillows; nor could he get any reſt for many nights and days previous to his death, a day or two before which we could perceive a greater fulneſs at the left *hypochondrium*, than at the right, which convinced us of what we had before ſuſpected, that a tumor of ſome ſort was formed in the cheſt.

The next morning, purſuant to his own requeſt, I opened the body, in company with another Surgeon who is now abroad, in the uſual manner; but upon dividing, though with the greateſt precaution, the cartilages from the ribs, in order to raiſe the *ſternum*, blood iſſued very copiouſly, from, as I then ſuppoſed, the cavity of the *thorax*; but on a further examination, I found it to be from within the *pericardium*, dilated to ſuch a degree, as to fill entirely the left cavity of the *thorax*, puſhing downwards the diaphragm, to which, as well as the *pleura* on that ſide, it adhered univerſally, except at the ſuperior part, where, after having ſeparated the

pericardium with my fingers, we perceived the left lobe of the lungs compreſſed quite under the clavicle, to that degree as to be no broader or thicker than the palm of one's hand, and ſo firm as to reſemble (in cutting through its ſubſtance) a ſteatomatous tumor. The right cavity was likewiſe conſiderably ſtraightened by the diſtention of the *pericardium*, though the lobe of that ſide did not appear to be unſound. As great part of the blood which had thus diſtended the *pericardium*, unavoidably eſcaped by the above-mentioned inciſion, we could not be ſo exact as to the quantity as we wiſhed to have been, but, from the neareſt computation, we agreed it could not be leſs than five pints. The blood appeared quite fluid, free from *coagula*, and in colour more like *venous* than arterial. After having emptied the *pericardium*, and wiped its internal ſurface clean with a ſponge, we attentively ſearched for the ſource of this phænomenon, but were unable to find the leaſt veſtige of a rupture, either in the heart or any of its large or coronary veſſels; ſo that, though we eaſily

found the immediate, we could not trace the remote cauſe of his death. The heart appeared ſound and in its natural ſtate.

A caſe ſomewhat ſimilar to the above is related by Dr. William Thomſon, in the fourth volume of the Medical Obſervations and Inquiries. And, though it is with regret, we muſt confeſs, that hiſtories of this kind promiſe but little towards the effectual relief of ſuch of our fellow-creatures as may in future labour under the like irremediable affliction, yet, if they ſhould, by throwing ſome light upon the ſubject, tend to enable practitioners to form a juſt knowledge of the diſeaſe, as well as a prognoſtic of the event, they will at leaſt contribute to the advancement of the medical ſcience, and the reputation of its profeſſors. For as *Proſper Alpinus de præſagienda Vita & Morte* juſtly obſerves, "Juvat quinetiam maxime Medicos: In "morbis acutis exitialibuſque, qui præ- "cognitam futuram ægrotantium mortem "ubi aſſidentibus prædixerint, mortis culpa "plane vacare ſolent; ægrotoſque audito

"prognoſtico

"prognoſtico non medicorum culpa, ſed "morborum vi interemptos, aſſidentes ju-"dicant. Quod ſi antea exitium non "prædixerint, ipſorum aut ignorantiæ, aut "negligentiæ mortem *omnes* adſcribunt, "interiiſſe que medicorum cauſa pro cer-"to habent."

ARTICLE XIX.

Caſes of Hydrophobia: Communicated by JAMES JOHNSTONE, M. D. C. M. S. S. R. M. ED. S. *Phyſician to the* GENERAL INFIRMARY *of* WORCESTER; *Member of the* PHILOSOPHICAL *and* LITERARY SOCIETY *of* MANCHESTER, *and of the* PHILOSOPHICAL SOCIETY *of* BATH: *With Reflections on the Prevention and Treatment of Perſons bitten by mad and hydrophobic Animals.*

Read November 21, 1785.

CASE I.

GEORGE POLLOCK, aged forty-five years, by trade a Blackſmith, was admitted the 5th of March, 1750, a patient

of the Royal-Infirmary at Edinburgh: about the end of November, he had been bit by a mad dog, on each ſide his left leg, a little above the ancle; the wounds bled freely, and were waſhed with common ſpirits immediately: the next day he was bled, and bathed the ſores in ſalt water, and, in about thirty hours after the accident, put himſelf under the care of Dr. Dundas, at that time, a phyſician of conſiderable practice in Edinburgh, who ordered ſixteen ounces of blood to be taken from the arm, and the following bolus, two of which were taken, each of the two ſucceeding days, without producing any very ſenſible effect.

℞ *Cinnab. nativ. Cinn. factit. aa gr. xxiv. Moſch. gr. xvi. ſyr. ſacch. q. s. f. bolus.*

He was then ordered to take a drachm and half of the *pulvis antilyſſus*, every morning in a little milk, for four mornings, to uſe the cold bath forty days ſucceſſively,

ceſſively, and to dreſs the ſores with mercurial ointment.

He omitted, however, the cold bath the laſt eight days, and latterly the ulcers were dreſſed with *unguentum baſilicon*, inſtead of *unguentum mercuriale*, by theſe means the ſores were kept open for a month or upwards: he had no pain from them, but the matter diſcharged was always thin and ſanious, and at no time good *pus*. However, he made no complaint till the 3d of March, in the afternoon of which day he felt a pain and weakneſs about the loins, *os ſacrum*, thighs, and falſe ribs, attended with heat, and ſharp pain in making water; next day he complained of ſharp pain in the abdomen, and about eight o'clock in the morning began to have that averſion and difficulty in ſwallowing liquids, which afterwards increaſed extremely, ſo that when admitted into the hoſpital, he could not attempt to drink any thing without a moſt dreadful effort; the attempt always occaſioning his fetching deep ſighs, and being affected with an univerſal horror, and ſuch

 violent

violent ſpaſms in the organs of deglutition, as almoſt endangered his being choked; yet, at no other time did he complain of any pain about his throat, or of heat there, and ſwallows bread and ſolid food without any difficulty; his other pains grow every hour more ſevere, and they are increaſed conſtantly when he endeavours to drink: he ſaid he would willingly drink, did not ſomething, which he cannot deſcribe, render the thought and ſight of liquids diſagreeable; and an attempt to take, and ſwallow them an inſuperable difficulty, and a violence which he cannot account for. He has not ſlept for forty-eight hours; his tongue is white and dry; his urine ſmall in quantity but high coloured; regular in ſtools; his pulſe feveriſh and hard, and not much altered by his attempts to ſwallow liquids.

Dr. Rutherford, Profeſſor of Medicine, and at the time Clinical Lecturer, being much attached to the doctrines of Boerhaave, determined to try the antiphlogiſtic method in this caſe, and ordered the patient, who had been let blood in the morning, to

loſe

loſe gradually the large quantity of ſixty-ſix ounces more; from this evacuation he became ſick, and a little faint, and his pulſe ſomewhat ſmaller and ſlower, though by no means in proportion to the quantity of blood he had loſt. The blood was not ſizy, but abounded with ſerum; the *craſſamentum*, of a florid, ſcarlet colour, and its texture looſe, like the blood of hyſteric women; the Doctor alſo ordered his head to be ſhaved, and often embrocated with equal parts of vinegar and water, and a ſlice of lemon with ſugar upon it, often to be given him; alſo,

℞ *Rad. Gramin.* ℥*ij. Fruct. Tamarind.* ℥*i. coque ex Aq. font.* ℔*iij. ad* ℔*ij. ſub finem addendo*
Rad. Liquorit, ℥*ſs. Colaturæ cap. unc ij. omni ſemihora.*

℞ *Sal. Nitri pulv.* ʒ*ij. Divide in doſes vj. cap. unam omni bihorio in hauſtu decocti.*

℞ *Decoct. Commun.* ℔*j. Mellis* ℥*j. Sal. Nitri* ʒ*ij. m. pro Enemate omni quarta hora injiciend.*

He was ordered panada for his food.

Eight o'clock at night, the clyſter brought away indurated *fæces*, in fifteen minutes after it was injected. Has taken four doſes of the decoction, and ſome panada. His urine high, drops ſome ſediment; the pulſe beats about ninety-eight ſtrokes in a minute; his pains, and heat in making water are leſſened, but his averſion and horror of liquids are undiminiſhed.

The profeſſor ordered the medicines already preſcribed to be continued, and to take after bathing his feet, the following draught.

℞ *Syr. Diacodii* ℥*j. repetendam intra ſpatium trium horarum ſi opus ſit.*
℞ *Spir. Vitriol. dulc.* ℥*ſs. cap. gutt. xxx. ſæpius cum potu communi.*

Tueſday, March 6, at ſix o'clock in the morning. Laſt night, about nine o'clock, the injection was thrown in, and his feet afterwards bathed, from which a clammy ſweat followed: for, the noiſe of the water

water made by his feet, made him ſhiver, ſigh often, and look wild about him. His pulſe at the time beat 115 ſtrokes in a minute, with an unuſual tremor in it. His urine, made in the night, paler: he had two clyſters and two anodyne draughts, after which he ſlept two hours at different times; being pretty free from pain, unleſs when urged to drink, at which time pains in the belly, beginning at the pit of the ſtomach, come on, and are attended with frequent ſighings, and violent convulſion. Directions are punctually obſerved. In giving drink, it was remarkable, that he always took a ſecond or third draught with leſs reluctance than the firſt, and, therefore, two or three draughts were commonly given him ſucceſſively.

Eleven o'clock. The *pediluvium* produced an hour's ſleep, and his pulſe roſe: his pain in making water gone, but *Hydrophobia* increaſed; he cannot take any liquid, and has an extreme averſion to any thing which looks like a fluid, or in which any fluid has been contained; but, when

his

his eyes are ſhut, or covered, he can ſtill drink.

Seven o'clock at night. He complains of a ſtounding pain, as he calls it, in his belly and ſmall of his back: which is moſt acute on moving, or ſitting up, in his bed. When he drinks, which he never does without horror and convulſion, he feels a ſtinging pain in his ſtomach, but none in his mouth or throat. Immediately after drinking, he ſweats about his head and breaſt, with vehement efforts to vomit, though nothing comes up. His pulſe hard, beats 104 ſtrokes in a minute; his tongue white and foul, fauces red, urine pale: he had a clyſter which operated twice, but brought away nothing but ſlime; his hands cold.

Ten o'clock at night. He goes on as before directed, attempts to drink with the ſame reluctance, horror, and convulſive motions, with deep ſighings; and after theſe, retchings, vomiting, increaſed quickneſs of pulſe, and return of pains. He

ſpits

ſpits *ſaliva* with great quickneſs, and with averſion. If it falls on his hand, he, as quickly, wipes it off, yet does not complain that it taſtes amiſs. He never offers to ſpit upon, or moleſt any one. He ſometimes ſlumbers for a few minutes, but it is interrupted by deep ſighs and convulſions. His pulſe, after bathing, roſe to 120 ſtrokes in a minute; though it has continued generally at 100 ſtrokes with interruptions. He voided an ounce of turbid urine, and took panada with the uſual reluctance, and a doſe of *Syr. e Mecon.* after which he ſlept half an hour.

Wedneſday, March 7. Eight o'clock in the morning. He was quite delirious betwixt ſix and ſeven, but is now pretty ſenſible. He makes ſtrong efforts to drink, though now for the moſt part ineffectually.

Eleven o'clock forenoon. Theſe efforts to drink always produce belchings, retchings to vomit, and pains, which begin in the lower regions of his belly, and ſqueeze every thing upwards towards his ſtomach, attended

attended with convulſions and deep drawn ſighs. His eyes are diſmally wild, red, and inflamed; talks much concerning his wife and family, with great affection; ſpeaks in a religious ſtrain, and ſays he is dying. Pulſe quick, but very weak and intermitting. He has had two boluſes. ℞ *Moſch. pulv.* ℈*ſs. Conſ. Roſar. q. ſ. f. Bolus.* Continue them every hour, and, as he cannot ſwallow any thing, let the clyſters and embrocation be uſed the oftener. ℞ *Sal. Nitr. Sacchar. alb. aa. p. redige in pulv.* a little of this to be given frequently.

Four o'clock in the afternoon. He had a *Moſch.* bolus about one o'clock, and *Opii gr. ij.* was offered, which he could not ſwallow. In ſpite of every effort to relieve him, the ſymptoms of death approach, with intermitting pulſe, cold ſweats, cold extremities; and in attempting to drink with his uſual courage, he was violently convulſed, the liquor, as in one choked, regurgitated back through his noſtrils, he fetched a deep ſigh, reclined his head, and expired. He never had

been

been furious, or in the leaſt inclined to offer violence or miſchief to any one; on the contrary, he was ſomewhat anxious leſt he ſhould be the occaſion of it. A looking-glaſs was frequently held before him, but it never diſcompoſed him in the leaſt.

Next day his body was opened by Mr. G. Lauder, at that time a celebrated Surgeon in Edinburgh. The ſtomach was much contracted in its ordinary ſize, and contained nothing. The ſmall guts ſeemed ſound, only the *ileum* ſeemed a little inflamed, and a few livid ſpots were ſeen upon it. The ſac of the *colon* was near as large as an ordinary perſon's head, and, beſides air, contained a large quantity of fæces. It was obſerved, that the inteſtines were much out of their uſual ſituation and order. The liver appeared a little livid; the gall-bladder much diſtended with bile, which tinged very conſiderably the adjacent parts of the *colon* and *omentum*. Nothing unuſual was obſerved in the contents of the thorax: and the further exa-

mination of the larynx and pharinx, and the opening of the *cranium*, were prevented by the Surgeon's finger being accidentally cut, which made it improper for him to proceed.

Dr. Rutherfoord, at this time profeſſor of the practice of phyſick and clinical lecturer, long celebrated as an able practitioner, as well as teacher of medicine, in Edinburgh, attended this patient with the moſt anxious and humane care; and in the lecture which he gave on the caſe he candidly retracted an opinion which he had learned from Boerhaave, and which had directed the meaſures he took. He ſaid he was convinced now, that the *Hydrophobia* is a ſpaſmodic, and not a high inflammatory diſeaſe. That though bleeding may be uſeful in preventing furiouſneſs, neither that, nor the proper antiphlogiſtic method, are to be depended upon, as the proper cure of the *Hydrophobia:* that in ſuch caſes, after bleeding once or twice, he would order *Sal Succini*, *Moſch*, and *Opium*, and, perhaps, bliſters. He thought bathing and

and other prophylactics ſhould never be neglected, but profeſſed no great confidence in the *Pulvis Antilyſſus*, which had about that time been warmly recommended by Dr. Mead, but which, I believe, has ſince fallen into diſuſe.

This caſe may be found recorded in the books of the Royal Infirmary at Edinburgh; but Dr. Johnſtone having been an attentive obſerver of the whole courſe of the illneſs, gives it from his own notes taken at the time.

Worceſter, October 24, 1785.

CASE II.

By EDWARD JOHNSTONE, M.D. *Phyſician to the* GENERAL-HOSPITAL *in* BIRMINGHAM, *and Fellow of the* ROYAL MEDICAL SOCIETY *at* EDINBURGH.

AUGUST 16, 1784, I was ſent for to Charles Bullock, of Weſt-Bromwick, a fine lively boy, aged four years, of a ſtrong

ſtrong vigorous habit of body. On Friday the 9th of July, he was bit on the right cheek, and juſt under and above the right eye, by a mad dog. The wounds were ſmall, bled little, and ſoon healed, leaving only a ſlight mark on the cheek, and a ſcar under the eye. The next day he began the uſe of the Ormſkirk medicine, which he took in the manner directed in the paper given with it, and ſome of the powder, mixed with a little digeſtive, was applied to the wounds. He ſeemed to enjoy his uſual health and ſpirits till the 15th of Auguſt, except that about a fortnight † before that time, he was one afternoon very dull, and paſſed a reſtleſs night, but was as well as uſual the next day. On the morning of the 15th he appeared very low and ſpiritleſs, had little appetite, his breath was obſerved to be very offenſive, and he complained of a pain ſhooting from the part where he had been bitten, to the teeth.

† His father ſaid, at the fall of the moon, though he did not appear to be certain of it.

He

He had a very reſtleſs night, and early in the morning of the 16th, Mr. Beardmore, an eminent Surgeon and Apothecary, was called to him, who immediately deſired aſſiſtance.

I ſaw him about twelve o'clock, when he was walking about a room, in which a number of people were collected, with an appearance of great anxiety and horror, and a peculiarly fierce look; he ſtarted on my entering, and expreſſed great apprehenſions of being ſent to the ſalt waters, but was much compoſed and pleaſed on my aſſuring him he ſhould not go there. I then deſired him to drink ſome ſmall beer, he immediately turned away, changed colour, expreſſed the greateſt horror and averſion, and was ſeized with a catching of his breath, and convulſive motions of the muſcles about the throat[a]; but upon its being removed, ſoon recovered his uſual compoſure, and without difficulty eat ſome bread and butter. A baſon of water was

[a] The ſame ſymptoms were likewiſe brought on by his being expoſed to a ſtream of air.

afterwards brought in, without his perceiving it at firſt; but as ſoon as he caſt his eye that way, he ſhewed great uneaſineſs, and upon putting his hands into it, was immediately ſeized with univerſal tremor and convulſive motions of the muſcles about the throat, attended by a kind of ſobbing half reſpiration, and ſuch an inexpreſſible anxiety and gloomy horror of countenance, ſuch a fierce ſcowling look of the eyes, as no language can give an adequate idea of, but which if once ſeen can never afterwards be miſtaken.

The diſorder being too clearly aſcertained, I ordered him to be put into a warm bath, which was done ſuddenly, but univerſal convulſions immediately took place, attended with an appearance of ſuffocation, which laſted ſome ſeconds; his breathing gradually returned, with a noiſe ſimilar to that uttered during each cough in the chincough, or in the croup, and he at the ſame time dejected a conſiderable quantity of viſcid frothy matter. Being fully perſuaded of the miſchief of this practice, I directed

directed a bolus composed of *Tart. Emetic. Op. pur. aa. gr. ſs. Moſch. gr. vj.* to be given immediately, and to be repeated every hour; and the following injection to be adminiſtred every three hours.

℞ *Aſæfœtid.* ℥*ſs. ſolve in Aq. puleg.* ℥*vj. Tinctur. Thebaic.* ʒ*ij. Muc. Gum. Arabic.* ℥*ij. M.*

℞ *Miſtur. præcedent.* ℥*ij. Juſcul. ovin.* ℥*iv. M. Fiat. Enema.*

Unguent. Mercur. fort. to be rubbed into the lower part of the face near the wound, round the neck, and other parts of the body, as often and in as large quantity as poſſible.

In the evening he ſeemed much better, and on being aſked to take ſome tea, with great reſolution, though with difficulty, ſwallowed a ſpoonful, which immediately brought on the ſame ſymptoms as before. I ſaw him by ſix o'clock of the morning on the 17th; he had paſſed a very reſtleſs night, the recumbent poſture always

bringing on the paroxyſms of the diſorder. He had only taken two boluſes, but the glyſters had been given regularly and ſtaid up; and a very conſiderable quantity of mercurial ointment had been rubbed in. His pulſe was much weaker than before, and very fluttering and variable. Upon endeavouring to walk he reeled conſiderably, and was almoſt conſtantly endeavouring to ſpit out the frothy viſcid *ſaliva*, which ſeemed very troubleſome to him°. Upon being deſired to eat ſome bread and butter, he took it into his mouth, and immediately ſpit it out and ſeemed to be in great agony. I directed four ounces of the mixture with *Aſafœtid*. and *Tinct. Thebaic*. to be injected as before, and half a grain of crude opium to be given every half hour, if it could be got down; a bliſter to be applied to the nape of the neck, and the mercurial ointment to be uſed as before. He only took two doſes of the opium.

° It is remarkable that he was anxious leſt the *ſaliva* ſhould fall upon thoſe about him, and frequently deſired them to get out of his way, when going to ſpit.

About

About eleven o'clock he was ſeized with violent convulſions, particularly about the muſcles of the throat, but affecting moſt of the other muſcles of the body, during which, he ſnatched at thoſe who were near him, and made a noiſe like a perſon ſuffocating: this fit laſted near half an hour, and afterwards he was perfectly exhauſted for ſome time, and fell into a cold clammy ſweat. Theſe convulſive fits, alternating with fainting ones, continued, with very ſhort intervals, till four o'clock in the afternoon, when he expired.

Reflections on the Prevention and Treatment of Perſons bitten by mad and hydrophobic Animals: By JAMES JOHNSTONE, M. D. &c. &c. &c. &c.

1. I BEG leave to add ſome reflections to theſe caſes. The firſt caſe forms a kind of epoch in the treatment of the *Hydrophobia*, which is now univerſally acknowledged and treated as a convulſive diſeaſe, not without ſome hope of ſucceſs,

if we may credit Sauvage, and other French writers of reputation; alſo, the caſe treated ſucceſsfully by Dr. Nugent, and one or two more related in the medical tranſactions of the college.

2. *Hydrophobia*, or an averſion and horror to liquids, is its true definition. A rabies with a miſchievous deſire of biting (*See defin. Linn.*) is in man, I believe, ſeldom unuſual, much leſs a conſtant ſymptom in this diſeaſe. This averſion or horror is produced in the mind by the action of the poiſon on the nerves, which occaſions ſpaſms in the throat, remarkably aggravated by every attempt to ſwallow liquids in particular, and accompanied with various ſpaſmodic pains about the *præcordia*, which are excited and in every part increaſed by the appearance, ſound, and touch of any fluid. It is then a ſpaſmodic *angina*, and the averſion to ſwallow may in part be an averſion to pain: but other *anginas* are painful without this horror; I therefore conclude, that in the *Hydrophobia* it partakes of delirium.

3. The

3. The attempting to conquer this averſion to the ſwallowing of liquids, produces dreadful, and, finally, fatal ſpaſms; in the firſt inſtance in the pharynx, perhaps from the ſalival liquors being peculiarly tainted with the poiſon; alſo the *œſophagus* and ſtomach, and all the parts in the abdomen furniſhed with nerves from the ſplanchnic nerves, and from that great centre of nervous ſympathy and action, the great ſemi-lunar ganglion, called by ſome *cerebrum abdominale*; which convulſions, in their continuance and progreſs, diſturb the natural and vital functions, and finally arreſt the motion of the heart.

4. During the *Hydrophobia*, the ſalival liquors, and thoſe perhaps which lubricate the *œſophagus* and *primæ viæ*, being ſtrongly impregnated with this fatal poiſon; may not the abhorrence of fluids which characterizes the diſeaſe, and which makes the ſwallowing of them ſo dreadful, be owing to the baneful ſtimulus of venemous *ſaliva* on the nervous and irritable ſurface of the *fauces* and *primæ viæ?*

 And

And are not these spasms, efforts, however ineffectual, of irritability, and the principle of life to throw off this poison? It is certain that antimony and many vegetable poisons are deleterious and fatal, as well as the poison of the viper and mad dog, though not discernible by taste.

5. Respecting the treatment of this poison, and such as are unfortunately likely to suffer by it: I apprehend the surest preventive, is (after wiping off and washing it away as much as can be done) to cut away, or scarify the bitten part immediately, and to destroy it by caustic or actual cautery. (See here the method of M. Le Roux. Appendix.) This is to be done as early as possible, and beyond the depth and extent of the bite. If this be done immediately, and no particle of the venemous *saliva* be left in the wound, the patient by this operation, and by suppuration kept up for two months, by digestive ointments, armed with red *præcipitate*, will be in perfect security [p].

[p] The misfortune of M. R——y, shews this external treatment, even when early performed, by a very able Surgeon, does not give absolute security, and that other means of prevention deserve attention.

At

At whatever time afterwards medical aſſiſtance is called for, the ſame local treatment is to be enjoined: and it is not to be omitted, even when ſymptoms of *Hydrophobia* are threatened, or appear, as the hiſtory of the diſeaſe ſhews, that the ſpaſms which affect the throat always ariſe from the bitten part.

But this prophylaxis, though never to be neglected, cannot be ſuppoſed, and, in experience has not been found, to give the ſame conſtant ſecurity, which it affords when done inſtantly after the bite. In ſuch circumſtances, the prophylactics which have been found moſt uſeful in preventing the progreſs and virulent effects of this poiſon, on the blood and nervous ſyſtem, muſt be had recourſe to.

6. Mercury has been found, in extenſive experience, to be a very effectual preventive of *Hydrophobia*, and, in ſome inſtances, has aſſiſted conſiderably in curing it: in the diſcreet application of this antidote, both externally and internally, and in adding

adding thereto the antiſpaſmodic and tonics, Peruvian bark, Valerian root, Moſch. and opium, the phyſician will probably give ſecurity to his patient, in moſt inſtances, if not at in all.

The uſual courſe which this poiſon takes, indicates the application of mercury to the bitten part, by applying it there, and by rubbing it around it; and alſo to the *fauces*, where it will mix with the *ſaliva* and *mucus* in the pharynx, *œſophagus*, and *primæ viæ*, and obviate the tendency of the poiſon in its moſt deſtructive courſe and period.

But the quantity of theſe mercurial adminiſtrations muſt never be ſo great, as to excite ſalivation, or conſiderably weaken or diſturb the body.

In an adult, half a drachm of ſtrong ointment, charged with camphire, ſhould be applied to and rubbed near the wound daily.

And

And two grains of calomel ought to be rubbed every evening within the mouth, enjoining the patient to ſwallow his ſpittle for ſome time afterwards: in this way, it will mix with the *ſaliva*, and paſs through the whole courſe of the *primæ viæ*, and, while it keeps the body open, will, in a ſmall quantity, mix with the lymph and blood; and without diſturbance or loſs of ſtrength will meet and correct the poiſon, if it enters the habit.

In very young patients, and delicate ones, the quantity may be diminiſhed, or in ſtronger ones increaſed.

After a fortnight, the calomel ſhould be intermitted, and a cathartic given, and an opiate in the evening, after the cathartic.

In ten days time the calomel ſhould be reſumed for another fortnight, followed with a purge and opiate, and intermitted once more for ten or twelve days, after which it may be again uſed a fortnight in the ſame manner, and then, if no ſymp-

toms

toms appear, the uſe of mercury may be laid aſide, and the patient's ſafety preſumed upon.

If the patient's reſt be diſturbed, or any dejection, hurry, or melancholy appears, he ought to uſe while this courſe is going on, Moſch. opium, aſſafœtida, and a drachm of an electuary of *P. Cort. Peruv. P. R. Valerian. aa. p. æ.* twice in the day, as occaſions require.

If any tendency to *Hydrophobia* appears, the doſe of calomel, or quantity of mercurial unction, ſhould be continued and greatly increaſed.

Emetics of Turbith mineral have been found of great uſe in preventing *Hydrophobia*, and certainly ought to be repeatedly given, with opiates afterwards, to allay the hurry of nerves, if any of the forerunning ſymptoms of *Hydrophobia* appear.

Emetics,

Emetics, even of milder operation, as well as the Turbith, muſt be highly uſeful, by evacuating the *ſaliva* and ſlime, if at all tainted, from the throat and ſtomach.

Hurry of nerves, ariſing from the remedies or the diſeaſe, require great attention, and muſt be removed by Moſch. and opium. To diſpel anxious fear, and to ſupport hope and cheerfulneſs, are indiſpenſibly neceſſary in preventing *Hydrophobia*.

Theſe are the means of prevention and cure I ſhall purſue when occaſions offer; they will not always ſucceed, but I know no better, and none ſo much ſupported by experience and authority, or ſo cloſely connected with the real phœnomena of the diſeaſe. In every diſeaſe, the beſt founded methods are ſometimes unſucceſsful: but to this, above all others, the introductory aphoriſm of Hippocrates has the juſteſt application; *Occaſio Præceps, &c.*

APPEN-

APPENDIX.

I PROPOSE to give here a ſhort view of the methods recommended in the ingenious papers publiſhed in the Second Part of the Hiſtory and Memoirs of the Royal Society of Medicine at Paris, 1783, on the ſubject of Canine Madneſs.

The following is the method recommended by M. Le Roux. Having diſcovered the direction and full dimenſions of the part bitten, by the mad animal, the wound muſt be dilated with a biſtory round its whole circumference, and a croſs, ſtar-like, to make the ſurface larger than the bottom of the wound. The tendons and larger veſſels are to be avoided as much as poſſible in making theſe inciſions. The wound is to be allowed to bleed freely, and to be waſhed with ſoap-water, or, the part is to be dipped in a bath of it, and then to be dried with lint, and covered till the next day. After removing the firſt dreſſing, a ſkewer of wood dipped in deliqueſcent

quefcent butter of antimony, is to be made to touch every part of the wound, particularly the bottom and edges thereof, and even the furrounding fkin. Every part touched with this cauftic becomes immediately white, and burnt to a greater depth, even of fome lines. A bliftering plafter is then applied over the wound, and widely beyond it, and this finifhes the fecond dreffing. M. Le Roux does not apply the liquid butter of antimony the firft dreffing, becaufe the blood would dilute and præcipitate the cauftic into a kind of powder of algaroth, which is not cauftic. He prefers the potential cauftic to the actual cautery, becaufe it gives lefs terror and pain, and burns more precifely to the defired depth, and the efchars are fooner feparated. He has only twice met with wounds in parts dangerous to be burnt, yet he repented afterwards his tendernefs, as both the patients died hydrophobic: when fo ferious a malady is to be feared, facrifices muft be made, and he will not avoid them in future. The blifters are cut and dreffed the next day, and frefh

9 butter

butter applied to the wound, till the eſchar falls off, which happens in a week: after this, the wound is kept open in abundant ſuppuration, by putting in ſeveral peas, or gentian root, of a ſize proportioned to that of the wound. As the fleſh ſprings up, it is to be burnt again with the butter of antimony, and freſh bliſters are again and again applied; for the wound muſt not be allowed to heal till after forty days. By this method alone he ſecures his patients, and gives no other internal remedy, except a few drops of *Spir. Vol. Alcalin.* and not that always.

M. Baudot is perſuaded that the effects of the bite, however extenſive they may become, proceed from action of the poiſon on the part originally bitten only. After cleanſing and waſhing the part with ſalt water, he applies a bliſtering plaſter, which covers the wound, and extends conſiderably beyond it: he afterwards rubs mercurial ointment, with the addition of camphor, very plentifully all around the bitten part, and over it; to theſe he adds

bathings and frictions with warm oil; this treatment is continued fifteen or twenty days, by which means only, he believes the mercury deſtroys the *virus* fixed on the nerves in the wounded part, and, that the oil in relaxing theſe parts, aſſiſts in hindering the ulterior propagation of thoſe ſpaſms, which would otherwiſe have extended their action to the ſalivary glands, and have excited *Hydrophobia*. A very great number of atteſted caſes are produced in ſupport of the efficacy of this preventive method. If he be called to ſuch as have not been early treated in this manner, and who are threatened by ſymptoms of *Hydrophobia*, he orders ſcarifications, in addition to the former method, with bleeding; nitre in apozems; opium, with other antiſpaſmodics. His ſucceſs was very conſiderable in every ſtage of the diſeaſe, the actual *Hydrophobia* excepted, which proved always irreſiſtibly fatal.

M. Bouteille, in a very methodical and well-written Eſſay, agrees nearly in approving the ſame mild local treatment as

 M. Baudot,

M. Baudot, by ablutions and bliſters; yet recommends alſo ſcarifications and cautery when ſtrictly neceſſary. He is alſo high in the commendation of mercurial ointment, rubbed in daily near the wound, and applied to it; which, in his opinion, both draws out the poiſon from the wound, and corrects it (61.) and, at the ſame time, eaſes the ſpaſmodic pains ariſing from the virulence of the poiſon: but thinks a mercurial ſalivation both ineffectual and pernicious. If the wound be cicatrized, when ſymptoms of *Hydrophobia* appear, he, in that emergency, recommends the application of cauſtic, or actual cautery, to the part, to open an external paſſage to the poiſon, which he preſumes to be ſtill acting there.

The mercurial method of preventing *Hydrophobia*, which had been cenſured as uncertain, and in ſome caſes hurtful, by M. Le Roux, is very warmly adopted and recommended by Meſſ. Baudot and Bouteille, though on different principles; and ſo to ſhun exciting ſalivation, which had been a mode in France, after M. Sauvage had

had publiſhed his ingenious Diſſertation ſur la Rage.

This mercurial method is the only one depended upon and recommended in the Memoir of M. Bonel, de la Blagereſſe, who truſts entirely to mercurial frictions, and to laxative mercurial pills, to be continued for about three weeks; and occaſionally to be purged off by an increaſed doſe of the pills, ſo that ſalivation may be obviated: he applies to the wound mercurial ointment only. He treated five hundred patients in this method, without a ſingle miſcarriage; and believes the ſame medicines in double or triple doſes, with the addition of *Moſch.* and other antiſpaſmodics, to be an effectual cure in the *Hydrophobia* itſelf: of which he has no hiſtory to produce, as he had conſtantly ſucceeded by his preventive method.

M. Mathieu, maitre en Chirurgie, in Perigorde, after bleeding and purging, depends altogether on copious mercurial frictions, to excite ſalivation, unleſs the

mercury occasions some other evacuation which will supply its place. He says, the *Hydrophobia* yields, as it were, by enchantment when the salivation appears; and it must be kept up more or less, according to the degree of the disease and strength of the patient.

Many instances have been produced in the course of these Memoirs, in which individuals were seized with, and carried off by, *Hydrophobia*, notwithstanding mercury had been very early and amply used, even to salivation: be it so; but this does not invalidate other respectable testimonies, that in a prodigious number of instances *Hydrophobia* had been prevented, and in others cured by it: hear the respectable Sauvage, who concludes a masterly work in the following words, " apres bien de " recherches, I' ignore que ce remede ait " encore manqué, étant, meme appliqué " quand la Rage etoit de clarée:" How few infallible remedies can we boast of in other diseases: shall we then quit this single anchor, because it has failed as others

others have done before, though it is granted to have ſucceeded ſometimes.

D. Metzlar, a German phyſician, in a very elegant and learned Latin Diſſertation, the laſt publiſhed in this volume, on the prevention and cure of *Hydrophobia*, concludes thus, "Haud aliud in terribili "hoc morbo, habetur remedium quam "mediante ferro inſtituta Inuſtio."

To this opinion, the Royal Society of Medicine ſeem indirectly to have added their reſpectable authority, by crowning the Memoir of M. Le Roux, with their firſt prize; their ſecond being ſhared betwixt Meſſ. Baudot and Bouteille, for their ingenious Memoirs, and by their poſitive declaration, that the external treatment, which conſiſts in deſtroying the part into which the *virus* is infuſed, is indiſpenſable, and the moſt important, without which all the other proceedings are uncertain; and, that among theſe laſt, ſuch as diſorder the animal œconomy, or ſtrongly

affect the nerves, expose the patient to more or less danger. (*Hist. de la Med.* p. 2.)

Happy will it be, if this indecision respecting internal remedies, excite an early and cautious care of the unfortunate objects of these Memoirs, and also, make the practitioners of the healing art more successful in their future applications, and, in the mean time, diligent in the use of the best means already discovered.

Worcester, December 24, 1785.

ARTICLE XX.

General Remarks and Cautions respecting some Cases in Surgery. By JONATHAN WATHEN, Esq. *Surgeon, and Fellow of the* MEDICAL SOCIETY.

Read March 11, 1771.

IT has been frequently remarked, that what are denominated capital cases, and operations, are too apt to engross our attention, to the neglect of those of an inferior class; which, nevertheless, by their number

number and frequency, become of great, if not of equal importance to the former; ſince there is hardly any one caſe, however trivial it may ſeem, to which not only the patient's welfare, but our own reputation, may fall a ſacrifice. I remember an inſtance of this kind, where, for want of due attention, an excellent ſurgeon and able anatomiſt treated a diſlocated ſhoulder as a ſtrain. A ſurgeon in the neighbourhood, greatly inferior to the former in point of real abilities, was privately conſulted, a fortnight after the accident: he declared the *arm was out*, and immediately reſtored it to its place. The firſt mentioned ſurgeon was thereby obliged to quit his ſituation, for one at a great diſtance, where, by more attention to the *minima*, as well as the *majora*, he acquired, and juſtly deſerved, the greateſt reputation in his profeſſion.

The number and variety of ſuch kind of caſes are indeed almoſt infinite, and require not only an extenſive, but a particular and diſcriminating knowledge and attention, without which, we cannot form their juſt

diagnoſis, *prognoſis*, or method of cure. The firſt of theſe ought to be made as early as we can, for our own direction; nor muſt we here ſolely depend on precedents or prior obſervations, ſince caſes ariſe every day which we have neither ſeen or read of, yet nevertheleſs admit of a clear and certain expoſition.—Mrs. S——, near Aldgate, had for ſome time an obſtinate ulcer on the inſide of her left leg. I perceived a white tough ſlough at the bottom of the ſore—a ſwelling about the ſize of a finger extended upwards, from the ulcer to the knee—and below it to the heel, with a redneſs of the ſkin, and an extreme ſenſibility upon touching or moving the leg. On laying hold of the aforementioned ſlough with the forceps, its upper attachment was felt at the knee, its lower at the heel. This appeared to me then, and now is, for ought I know to the contrary, an unprecedented, at leaſt an unregiſtered caſe; nevertheleſs, the locality, continuity, and ſenſation at the heel and knee, afforded a certain *diagnoſis*, that the *muſculus plantaris pedis* was the ſubject of the

the inflammation: and the ſloughy appearance a proof of the partial if not total deſtruction of its texture. A ſeparation took place, and I extracted the whole of that long thin muſcle, which is now in my poſſeſſion, though greatly altered and mutilated. The wound healed firmly afterwards, without any ſenſible inconvenience to the patient.

I need ſcarcely obſerve, that a tolerable knowledge in phyſiology, and pathology, are antecedently neceſſary; as well as a quick diſcernment and ſagacity, in order to form an early and juſt *diagnoſis*.

Miſs S—— had the misfortune to hurt her elbow by a violent fall, and that joint was greatly diſtorted; but ſwelled ſo ſpeedily as not to admit of an accurate examination. All proper means were uſed for reducing the ſwelling, but ſo much time elapſed before it ſubſided, that the diſtortion, and partial diſlocation, now apparent, were ſo fixed, as to render reduction as imprudent to attempt, as impoſſible to

effect.

effect. This case was doubly fatal; the young lady's arm remains deformed, useless, and daily wastes away, with never-ceasing pain: and the surgeon who attended it from the first is, (however unjustly) the constant subject of censure wherever the patient appears, or her misfortune is the subject of conversation. It is pretty certain that every proper method was used, and nothing omitted, that was the least essential to her recovery. Nevertheless, for want of forming a just *diagnosis* at the first, and also divulging a cautious and early *prognosis* of the event, which might easily have been ascertained, the surgeon has greatly suffered in his reputation; nor will the patient or her friends ever believe the case to have been well understood, or properly treated.

The tendons and their *thecæ*, are liable to various injuries—a puncture, a bruise, a strain, &c. produce primary symptoms very different from each other. Some, as the locked jaw, &c. are of a dangerous nature, and ought cautiously to be predicted, as well as their subsequent effects;

effects; which effects, notwithstanding the difference of the cause, are in general very similar: viz. a contraction of the flexor or flexors of the members to which the tendon, &c. pertain. In order to explain my meaning, let us suppose one or more tendons of the *extensores digitorum*, or their *thecæ*, to be injured: the permanent effects of this injury will be a contraction of the flexors their antagonists. Suppose again, the flexors to be hurt in like manner, the result will still be a contraction of the fingers, unless prevented by a proper treatment. These effects, which frequently follow considerable injuries of the muscles, as well as of their tendons, are seldom perceived till some considerable time after the primary symptoms are abated, and the case relinquished. The afore-mentioned contraction proceeds by very slow degrees, till at length the fingers or toes become close shut, or the knee or elbow contracted into an acute angle. The reason why the effects in both instances are thus similar, is obviously owing to the greater strength and power which the flexors have over the

extensors

extenſors in general; ſo that whenever the former are injured, or the latter weakened, the contracting power of the ſtronger is always increaſed in proportion to the diſparity of thoſe powers. In fine, it may be concluded from the ſtructure of the articulations, as well as from the muſcles, that the *extenſors*, eſpecially thoſe of the extremities, do little more than reinſtate the member, after it has been acted upon by its flexors.

Mrs. ——, houſekeeper to Mr. P——, bruiſed the palm of her hand with a peſtil in pounding ſpices; when the ſwelling and pain ſubſided, a little knot was perceived to remain: this was looked upon as of no conſequence, and the ſurgeon quitted the patient as well. Some time afterwards, the ring finger began to grow crooked, and in the ſpace of a few years, has contracted itſelf cloſe in the palm: the other three fingers are now much bent, and threaten the ſhutting up of the whole hand. At the place afore-mentioned, the ſkin, tendons, and their *thecæ*, are firmly united,

united, and are ſeen to move together in the little remaining motions of contraction: in a word, her right hand is now altogether uſeleſs, and does diſhonour to the art we profeſs; both which might have been prevented by an early *diagnoſis*, and a long continued counteraction of their propenſity to contraction.

We meet with many diſorders properly chirurgical, which admit only of a palliative cure, and others that are in their own nature abſolutely incurable. Here the *prognoſis*, though a painful and mortifying taſk, becomes as neceſſary to be predicted, as in other more agreeable and fortunate caſes. But this *prognoſis* which reſults from the *diagnoſis*, as an inference from a certain axiom, and which we are obliged in almoſt every inſtance not only to form to ourſelves, but to communicate to the patient or his friends, requires the greateſt caution and prudence. If we foreſee the diſeaſe will turn out fatal, a limb remain deformed, or a part continue uſeleſs, we are under the neceſſity of making a ſuitable prediction; but if this be

done

done ſuddenly or abruptly, we give a ſhock, which will rebound upon ourſelves. If it be not clearly expreſſed, we are liable to have our words miſtaken or perverted; and if not delivered to a proper perſon, in whom we may confide and truſt, as our ſubſtantial evidence; either of the aforeſaid events will at length be reflected on the careleſſneſs or incapacity of the ſurgeon.

The conſtricted *Oeſophagus*, a diſorder which of late years occurs, I believe more frequently than formerly, is one of this claſs. It is abſolutely incurable, except in an early ſtate, and before an ulcer commences; or, in other words, whilſt the contraction of the tube is yet ſimple, with no other thickneſs or ſolidity, than what ariſes from its texture being compriſed in a leſs ſpace than before. I have been conſulted in at leaſt forty caſes of this kind within the laſt twenty years, and whatever be the cauſe, whether the ſwallowing hot, ſcalding, or ſpirituous liquors, from accident or habit, which I think not improbable: its ſeat is nine times out of ten in that part of the canal

where

where it adheres to the back of the *thyroid cartilage*. In this ſtage a daily introduction of the bougie, the ſize of which ſhould be gradually increaſed, and frequently ſwallowing pills, and at laſt boluſes, of butter and boiled fat, will by degrees dilate the tube in that part. I lately cured a caſe in this ſtate of the diſeaſe, in which Mr. Elſe was concerned with me. There are ſome now living, who have been well ſeveral years, from the ſame mode of treatment. I have examined ſeveral, who died in conſequence of this ſimple ſtate of the diſorder without the leaſt ulceration, the tube being ſo entirely cloſed as not to admit the ſmalleſt probe; but when the part ulcerates, its cylindrical form is perverted, and *ſacculi* are formed, &c. death muſt inevitably follow. The ulcer in ſome inſtances erodes the *thyroid* and *cricoid* cartilages or the *aſpera arteria*, or elſe it penetrates laterally through the coats of the *gula*, through which the food and drink attempted to be ſwallowed make their way, and ſuddenly put an end to the patient's miſery. I have opened ſeveral where theſe effects,

with ſome others, were truly apparent, and have a drawing of one with a large hole in the ſide of the *Oeſophagus*, through which the food eſcaped into the thorax. I was concerned about a year ſince, with Dr. Hunter, in a remarkable caſe of this kind, which I believe he will publiſh in the next volume of Medical Obſervations.

There is another mortal diſeaſe which I do not find deſcribed in any writings that have occurred in my reading. It is an ulcer in the ventricles of the larynx, accompanied with a remarkable hoarſeneſs, and perpetual irritation at the top of the windpipe, which excites a cough: nothing abates this hoarſeneſs, or cough; there is no pain, or ſoreneſs in the lungs; it commences in ſome who are otherwiſe in perfect health, and continues ſome years before it brings them to extremities. The cough in time expels real *pus*, which increaſes more and more; the patient becomes hectic, and dies. The Rev. Mr. Skinner, Mr. Draper, Mr. Phipps, with ſeveral others, have fallen victims to this diſeaſe within theſe laſt five

years. I have now a patient with Dr. Smith, who is not likely to live long, and whom I hope his friends will permit me to examine after death: I ſhould think myſelf happy in a permiſſion, which could not be obtained in any of the above-mentioned inſtances: I am, however, already convinced of the reality and locality of this fatal diſeaſe. In ſuch unfortunate and miſerable caſes, the *prognoſis* is the ſurgeon's only ſecurity; it is his entrenchment againſt the ſecret aſſaſſin, or the open enemies of his reputation.

Strictures of the *urethra* and other tubular parts, as they are frequently the ſubject of our attention and employment, demand a ſuitable *prognoſis*. Theſe moſt commonly occupy the membranous part of the *urethra*, or ariſe from a ſwelling and inflammation of the proſtate gland; and though they are ſeated in the poſterior part of that tube, admit of a palliative, and ſometimes a laſting cure, by the bougie. But there are others anterior to theſe, in ſituation ſtill more fatal in their con-

ſequences, if not well attended to, and at the beſt admit only of a very diſagreeable, as well as palliative cure. I mean obſtructions anterior to the bulb, and where the *corpus ſpongioſum urethræ* is affected. Theſe never admit of a perfect cure; and if the bougie is not conſtantly uſed, the part, however diſtended, will cloſe in a ſhort ſpace of time; they muſt therefore never be left off during life. I have been called to ſeveral with a total ſuppreſſion of urine from this cauſe, the *urethra* being cloſed up, ſo that the ſmalleſt probe could not be paſſed; and have relieved them by opening the *urethra* above the ſtricture. This opening alſo demands the perpetual and conſtant uſe of the bougie, which would otherwiſe be liable to cloſe up entirely. Were it neceſſary, I could give the hiſtory of ſeveral caſes in perſons now living, otherwiſe well in health, in confirmation of this aſſertion.

Another cauſe of obſtruction, is ſtones lodged in the *urethra*; their general ſeat is about an inch above the *frænum*, and ſometimes cauſe an entire ſuppreſſion of urine.

urine. I ſhould not have mentioned this diſorder, ſo obvious one would think to the moſt curſory obſerver, were it not that the puncture of the bladder was lately performed for a ſuppreſſion, when the only cauſe was a ſtone ſeated in this part, the extraction of which by inciſion, or cutting the *urethra* above the obſtruction, would have effectually relieved the patient, who died in conſequence of the aforeſaid puncture. About three weeks ſince, a young man came with a total ſuppreſſion of urine, from a rough mulberry ſtone lodged in the part above-mentioned: the *corpus ſpongioſum urethræ* and glans *penis* were ſo much ſwelled as not to admit the probe into the *urethra*; but the ſtone was aſcertained by the finger ſufficiently to authoriſe cutting upon it, by which means it was extracted, though not without great difficulty, owing to its rough jagged ſurfaces. It may be here remarked, that the inſtrument invented by Dr. Hales, can never be uſed with ſucceſs for ſtones of this kind; but I have tried it with ſucceſs once or twice where they were ſmooth and equal.

I ſhall cloſe theſe Obſervations with a caſe which has frequently occurred to my notice, of which, however, I have never yet met with any true account in chirurgical writers. It concerns the abductor and extenſor *minor pollicis*, chiefly of the right hand; it is generally produced by that kind of fighting called boxing, though it ſometimes happens from other cauſes.— A man who had been long ill of a fever, took a trowel in his hand to ſcoop out a ſmall parcel of ſoft ſoap from a tub; he felt a pain and kind of a crack on the inſide of his fore arm, the part ſwelled a little, and he became unable to uſe his thumb, or indeed his hand, without great pain. When he came to me, which was about ten days afterwards, I found the muſcles afore-mentioned, which run obliquely over the radius, elevated above their proper ſitus; they ſenſibly grated when the thumb was extended or abducted. I concluded, as I had before done, that theſe muſcles were in part torn from their origin, and that the grating ſenſation was occaſioned by their looſe fibres rubbing over the bone; I ordered,

ordered, as uſual, the thumb to be kept in a ſtate of extenſion, and bound down the muſcles. This proceſs was continued for a fortnight, which I have ever found long enough for their adheſion, and he is now well. Whatever motion extends theſe muſcles beyond their natural capacity of elongation, will produce the ſame effect, for which the above method will always be found an effectual remedy.

What enables us to form a juſt *diagnoſis* renders us capable of giving a right *prognoſis*; whilſt both are equally neceſſary to make us honourable, as well as ſucceſsful, in our profeſſion.

ARTICLE XXI.

A Caſe of a Head-Ach attended with uncommon Symptoms: By THOMAS HENRY, F. R. S. C. M. S. *Member of the* AMERICAN PHILOSOPHICAL SOCIETY, *held at* PHILADELPHIA, *and Secretary to the* LITERARY *and* PHILOSOPHICAL SOCIETY *of* MANCHESTER.

Read May 10, 1779.

THE methods of which Nature ſometimes makes uſe to relieve herſelf from any noxious matter, and to depoſit it out of the road of the circulation, are ſo very inexplicable, that we are by no means able to follow her in her operations, nor to diſcover by what ſecret powers ſhe expels the enemy from her quarters; it is however curious, and may not be totally uſeleſs, to trace her ſteps, as far as our limited faculties will permit, and to obſerve the efforts ſhe makes; as theſe obſervations may at leaſt teach us that *ſhe* may ſucceſsfully exert herſelf, where art proves inſufficient. As the following caſe is an uncommon inſtance

ſtance of ſuch exertion, I preſume to ſubmit it to the inſpection of the Medical Society; and I hope I ſhall not be deemed prolix, in relating ſome previous circumſtances, which may lead to the better underſtanding of *that* which is the more immediate ſubject of this paper.

Mr. Nathan Sandford, of Burnage, near Mancheſter, of a thin habit of body, ſubject to an habitual cough from his infancy, and to glandular tumors of his neck, which were diſperſed without ſuppuration, had, in other reſpects, enjoyed a tolerable ſhare of health, till the month of February 1759. He was then about twenty-four years of age, and, having ridden late at night on a journey, he had the misfortune to lie in a damp bed at Fenny-Stratford. Towards morning he fell into a profuſe ſweat, and in that ſituation imprudently got up, and purſued his journey, without changing his linen. In a few hours he became extremely hoarſe, and, as the day advanced, a ſevere fever and *peripneumony* ſeized him. With difficulty he ar-

rived at Thame in Oxfordſhire; where, having received every medical aſſiſtance, which the ſkill of that excellent phyſician, the late Dr. Lewis, of Oxford, could afford him, a critical eruption, of the eryſipelatous kind, in both legs, attended with conſiderable ſwelling, removed his fever and dyſpnæa; and as ſoon as his ſtrength was ſufficiently reſtored, he returned home, and recovered his uſual ſtate of health.

In November following, having occaſion to travel into the ſame country again, he was attacked one day with a violent vomiting, which was ſucceeded by an eryſipelatous tumor of his left cheek, the progreſs of which was moſt quick and alarming. He arrived that evening at his old lodgings at Thame; and an apothecary, after bleeding and other proper evacuations, ordered fomentations to the part, which, though applied ſo hot that the nurſe could not bear to wring out the flannels without lapping them in a cloth, excited not the leaſt ſenſation in the patient. The diſeaſe now occupied his whole face and head, and a gangrene

a gangrene was apprehended. Dr. Lewis was again consulted, and directed more blood to be taken away; and so very urgent were the symptoms, that, in the space of twenty-four hours, he lost forty-eight ounces of blood. An alteration, which was made in the fomentation, occasioned some degree of feeling; the swelling gradually subsided, and in about three weeks he came into Lancashire, where, exactly at six weeks distance from the day the erysipelas first appeared, he had a second, though milder attack of it, and a third, still more gentle, at the very same period of time from the second.

The parotid and submaxillary glands now grew enlarged and painful, and, at last, suppurated in April 1761. That summer he was sent to bathe in, and drink, the sea-water: the ulcers healed, and his health was so much improved, that he married before the conclusion of that season. For several successive years, a cough, loss of appetite, and other consumptive symptoms, visited him, with increased force, each

spring;

ſpring; yet they generally yielded in ſome degree, to phlebotomy, nitrous medicines, elixir of vitriol, &c. and were always ſucceeded, as the weather grew warmer, by a ſcorbutic eruption and ſwelling of his legs, which were looked for impatiently, as a favourable omen of the departure of his other complaints.

In April 1770, his uſual train of ſymptoms made their appearance; but nature now ſeemed to have forgot to afford her accuſtomed aid. His cough was more ſevere than in former ſprings; he complained of great ſoreneſs and ſtricture of his breaſt, which being attended with hectic heats and conſiderable loſs of ſtrength, threatened a fatal termination. Though he had formerly lived freely, the ſmalleſt quantity of any fermented or ſpirituous liquor now intoxicated and inflamed him. Venæſection, a perpetual bliſter, demulcents, and his uſual medicines were tried in vain; when, in the beginning of June, having been perſuaded by one of his neighbours to drink a ſmall draught of ale, a ſudden

hæmorrhage proceeded from the noſe, which had continued for ſome hours before I ſaw him. Blood was taken from his arm, and the diſcharge from his noſtrils reſtrained by paſſing tents up them dipped in the *lixivium martis* a little diluted. Though his blood was covered with a buff coat, yet as the texture underneath was looſe, he took freely of a decoction of Peruvian bark and tincture of roſes, to each doſe of which ten or twelve drops of *lixivium martis* were added, care being taken to keep his body ſufficiently open. The bleeding returned again next day but one, and, though not very profuſe, continued with little intermiſſion twenty-three hours; but was at laſt ſtopped by the ſame methods. He was greatly reduced by the loſs of ſo much blood; yet his cough abated, the ſoreneſs and tightneſs of his breaſt in a great meaſure left him, and he paſſed the autumn and winter, though in a very valetudinary ſtate, yet free from any immediately alarming ſymptoms.

His conſumptive complaints returned in

in the ſpring of the enſuing year, with redoubled violence, before he had totally recovered from the ſhock he had received the preceding ſummer. On my urging him to call in further advice, he conſented to conſult Dr. Kay, a judicious and very worthy phyſician of this town, by whoſe ſkilful treatment of him he obtained ſome relief. But tired, and imagining every thing to be in vain, he determined to give himſelf a truce from all medicines. In a few weeks he recovered a better ſtate of health than could have been expected; but he came on the 20th of July to inform me of an uncommon pain in his head, which attacked him every night as he lay down in bed, and ſometimes infeſted him in the day, at irregular hours. The deſcription he gave me of it was as follows:

At its firſt coming on, it fixed in ſo ſmall a ſpace that he could cover it with the end of his finger. The ſeat of it was in the lower part of the *coronal ſuture*, about an inch above the *os ſphenoides*; and he ſhewed me a vacuity or chaſm, about an inch

inch long and one-ſixth of an inch broad, in the courſe of the *ſuture*, which he ſeemed certain was not pre-exiſtent to his headach; as he judged it impoſſible it could have eſcaped his notice, having always ſhaved himſelf. While the pain, which was exceſſively acute and lancinating, remained here, the part was puffed up like an inflated bladder, for about the ſize of an half-crown piece, and the temporal artery appeared tenſe, like a diſtended cord. From hence it removed to the *proceſſus condyloides*, and, while it remained there, occaſioned a convulſive motion of the lower jaw; it then changed its ſituation to an inch and half below the angle of that bone, and after ſome duration in that point he became ſuddenly and totally eaſy. He had laboured under theſe complaints during three weeks.

On the 31ſt of July he called on me again, and gave me the following account: That his breath had had an unuſually diſagreeable and earthy ſmell, which commenced ſome days after the pain in his head

head firſt begun, and, that as he was ſitting in his own houſe, the day after his former viſit to me, without any previous fit of coughing or retching, he was ſuddenly in danger of ſuffocation by ſomething falling into the *Oeſophagus*, where it ſtuck. With conſiderable efforts, he ſpat up a ſolid angular ſubſtance, above the ſize of the end of his thumb, conſiſting of a hard brown and white matter, the latter of which on being preſſed fell into a dry powder. The whole was covered with a greeniſh *mucus*, and reſembled exactly in ſmell the *fœtor* which had affected his breath for ſeveral preceding days, and which now immediately ceaſed. He had felt no pain the day before this happened, nor had it returned ſince that time. On my examining the ſeeming deficiency in the *ſuture*, he complained of intolerable uneaſineſs from the preſſure of my finger, which he ſaid ſeemed to affect the internal part of his head. I was much diſappointed that he had not reſerved the above ſubſtance for my inſpection.

On

On the 8th of Auguſt, he had a ſlight return of the pain in his head, which laſted about two minutes; he then perceived ſomething to fall into his throat, which he ſoon diſcharged, and proved to be ſimilar to what he had before parted with, but in ſmaller quantity, and broken into ſeveral fragments. His pain inſtantly ceaſed, but a numbneſs continued in the ſide of his head and face, for ſeveral hours, both after this and the preceding evacuation. I have examined this matter with a good microſcope; the white part appeared to be *calcareous*, the brown to be *mucus* hardened and adhering to the other. The ſmell was like that of bones, which have been long buried in the earth, on their being expoſed to the air. The white matter ſtrongly fermented with ſpirit of vitriol, but the brown occaſioned no efferveſcence with the acid. The vacuity in the *cranium* was much diminiſhed, when I ſaw him two days after this event; and he could then bear me to preſs upon the integuments, without ſuffering any conſequent pain.

From

From this time he had no further return of his pain, during many months; and he acquired ſuch a degree of ſtrength as to be able to attend to the buſineſs of his farm, and even to ride thirty miles a day on horſeback: and had I not been witneſs to the many viciſſitudes of his conſtitution, I ſhould have entertained hopes of the re-eſtabliſhment of his health. But in January 1772, his cough again became worſe; convulſive ſpaſms ſometimes attacked his head and neck; his ſtomach rejected almoſt every kind of food; and, often, the only liquor which it would retain, was rum, unmixed with water: he alſo complained of a ſenſe of contraction in that organ.

After having lingered in this miſerable ſituation till the beginning of April 1773, death at laſt put a period to his ſufferings. He had always expreſſed to me a deſire of having his body opened, after his deceaſe; but, from ſome cauſe or other, I received no intimation of his death, till the evening preceding his funeral.

During

During his laſt illneſs, he had a ſlight return of his head-ach, and again ſpat up a ſubſtance, ſimilar to that I have before deſcribed.

Several difficulties occur in attempting to account for the above ſingular appearances. In the firſt place, it may be aſked, was there a tranſlation of matter from the lungs to the brain, or its *meninges*; and ſuppoſing that to be the caſe, would it not have produced more alarming ſymptoms? Of what nature was the ſubſtance he evacuated, and where could it have lodged, previous to its diſcharge? He had no ſenſe of uneaſineſs, or obſtruction in the *frontal ſinuſes*; nor about the noſe nor *fauces*. Whence aroſe the vacuity in the *ſutura coronalis*? Is it probable that there had been a ſolution of the bone from ſome acrimonious matter, which had been gradually abſorbed, or immediately carried through the *ſphenoidal ſinus* to the *naſal*, and ſo depoſited in the *cellular membrane* behind the *velum palati*? Or was it formed without any diſeaſe in the *cranium* or its

 contents;

contents; and did the head-ach arife from the irritation of this extraneous body wherever fituated, antecedent to its falling into the *Oefophagus?* And in this cafe, might not the violence of the pain occafion a feparation of the *future*, fo as to produce the chafm I have mentioned, without any lofs of fubftance?

ARTICLE XXII.

Cafe of Angina Pectoris: By EDWARD JOHNSTONE, M. D. *Fellow of the* ROYAL MEDICAL SOCIETY *of* EDINBURGH, *and Phyfician to the* GENERAL HOSPITAL *at* BIRMINGHAM. *Communicated by* DR. LETTSOM.

Read, October 2, 1786.

J. SIMKINS, aged fifty, of a robuft habit of body, who had in the former part of his life been in a fituation much fuperior to his prefent one of an Iron-Cafter, and lived very irregularly, came to me, May 26, 1785. He complained

of

of ſharp pain exactly under the middle of the *ſternum* upon quick motion, and eſpecially on going up hill, which gradually extended internally through the breaſt, on each ſide down the arms to the wriſts (where he had a ſenſation ſimilar to that occaſioned by an electrical ſhock, or as if it was breaking) and ſo out at the ends of his fingers, attended with violent palpitation of the heart and difficult reſpiration. Paroxyſms of this kind occurred frequently in the courſe of a day, and laſted from a quarter of an hour to an hour, and ſometimes an hour and a half, and then left him free from complaint, except weakneſs and tremor of his hands. He had been affected about two months, at firſt perceiving only ſlight palpitation of the heart and difficulty of reſpiration on going up hill; but from that time the paroxyſms gradually increaſed to their preſent ſtate: body in general regular, and water in uſual quantity; pulſe, except during the paroxyſms, natural. I ſent him to the hoſpital near this town, and ordered the following medicines.

℞ *Assæfœtid.* ℈ij.
Camphor, ℈j
Extract. cicut. ℈jss
Syr. Balsam. q. s. f. pil. xxiv.
Cap. iv. bis in die. *Full Diet.*

May 29. The paroxysms have been less frequent since he came into the house, but he hath used little exercise.

On beginning to dose, he frequently starts up, from a sense of rising in his throat and palpitation of the heart, especially after taking a full meal.—His legs begin to swell at the ancle towards the evening, but his urine is in proper quantity.

June 3. The paroxysms now last only ten minutes.

June 14. Fits have gradually got slighter, and last for a shorter time; hath not had one since the 11th.

June 17. Walked upwards of six miles yesterday,

yesterday, and felt only a very slight return of his complaint.

June 25. Had a very short paroxysm last night, which is the only one he hath felt for some time, notwithstanding he hath walked out every day.—Made out-patient.

He came about three weeks afterwards and informed me that he had had some slight returns of his disorder, and that his legs continued to swell at night. I ordered *Fol. Digital. Purpur. siccat gr. unum*, to be added to the evening-dose of his pills; and by the use of this for a few days the swelling entirely subsided, and he continued so free from complaint as to be able to return to his business.

Birmingham,
Aug. 28, 1786.

ARTICLE XXIII.

Of the Efficacy of the Hyoſcyamus, *or Henbane, in certain Caſes of Inſanity: By* A. Fothergill, M. D. F. R. S. &c. *of* Bath. *Communicated to* Dr. Lettsom.

Read October 2, 1786.

AGREEABLE to your requeſt, I now ſend for your peruſal, ſome account of the effects of the *Hyoſcyamus*, which I obſerved during a few trials of it ſeveral years ago, and which were minuted down at the time they occurred.

John Wills, aged fifty-three, of a corpulent habit, and ſwarthy complexion, deſtined to a ſedentary occupation, having met with misfortunes, devoted himſelf to grief and ſolitude. His mind being filled with gloomy and diſtreſsful apprehenſions concerning a future ſtate; he fancied himſelf haunted by ghoſts and ſpectres, and conſidered himſelf as an object of divine vengeance.

He

He became penſive, timorous, and ſuſpicious, ſometimes ſullen, and moroſe, threatening violence to himſelf and others; till, at length, the diſeaſe having terminated in a ſettled, and confirmed melancholy, confinement became abſolutely neceſſary. At the lunar periods, the ſymptoms generally increaſed, but not conſtantly. During his lucid intervals, he would ſometimes converſe rationally, complaining of a ſevere cramp about the region of the ſtomach, attended with obſtinate watching, inquietude, flatulency, and conſtipation. None of his anceſtors had been known to be affected with inſanity.

Being not eaſily moved by medicines, I ordered him a ſtrong emetic of antimonial wine to be taken in the evening, followed by a briſk cathartic of ſoluble tartar the next morning, both which operated very freely. Theſe were ſucceeded by an antimonial diaphoretic combined with camphire and opium, laxatives being occaſionally interpoſed. Veneſection alſo in the *ſaphæna* was performed a little before the

full moon. By this method the pain of his ſtomach was relieved, but the maniacal affection remained unabated, and continued to reſiſt the moſt approved remedies. I reſolved, however, to try other powerful medicines of the narcotic claſs, and therefore had recourſe to the Henbane [q].

The plant being in full vigour, a quantity of the expreſſed juice was expoſed, in a flat earthen veſſel, to the ſolar rays. The ſun being very powerful, having juſt entered the ſummer ſolſtice, ſoon evaporated the aqueous parts, and reduced the remainder to the conſiſtence of an extract, ſuitable to the form of pills [r].

[q] Hyoſcyamus niger foliis amplexicaulibus, ſinuatis, floribus ſeſſilibus. *Linnæi Spec. Plant.* 257.

[r] In like manner, I have repeatedly prepared the Extract of Hemlock, and cannot help conſidering it as a conſiderable improvement in the proceſs, which is equally applicable to other inſpiſſated juices. It not only avoids all danger of Empyreuma, but alſo yields an extract of ſuperior activity. Whether the extract thus prepared imbibes ſome new property, or acquires ſome additional virtue from the ſun-beams, muſt be left to future obſervation.

I ordered

I ordered a pill composed of five grains of this extract to be administered morning and evening, which agreed well, but produced no sensible effect, except that of a mild diuretic. The week following it was directed to be increased gradually to fifteen grains a day, with a suitable dose of aloetic pills interposed occasionally to prevent costiveness. The extract continued to operate as a diuretic; his nights became more composed; he no longer started on hearing the door opened, or attempted to conceal himself when a stranger approached. It was increased daily till he reached thirty grains a day, when it began to occasion a slight giddiness, and propensity to sleep, but the symptoms of melancholy abated: he rested better, and began to converse with more composure. The extract was further increased; but when he arrived at forty grains a day, the giddiness and soporific disposition considerably increased, and denoted an over-dose, which obliged me to descend to thirty grains a day, which he bore without inconvenience, and all the symptoms became more favourable. His timidity, and apprehensions of evil spirits,

forsook

forſook him, and his countenance began to aſſume a more cheerful and ſerene aſpect. After taking the extract about ſix weeks, he appeared to be perfectly reſtored; however, it was continued a fortnight longer, when he returned to his buſineſs, and afterwards aſſiſted in the harveſt, and I had ſome time after, the ſatisfaction to hear that he continued to enjoy the *mens ſana in corpore ſano*, without any ſymptom of relapſe.

Having from this unexpected ſucceſs, conceived a very favourable idea of the virtues of Henbane, I afterwards gave it in a caſe of the *puerperal* mania, and with ſimilar advantage. The maniacal ſymptoms were wont to come on ſoon after delivery, but yielded in a few weeks to this medicine, and that repeatedly after two ſucceeding deliveries. The extract ought to be prepared freſh every ſeaſon, according to the proceſs already mentioned, and carefully preſerved in a cloſe veſſel, otherwiſe it ſoon loſes its efficacy. And it is neceſſary to obſerve, that where theſe precautions have been neglected, it has ſince entirely

entirely failed in certain maniacal affections, though given in full doses. Whether this was owing wholly to the inefficacy of the remedy, or the disease being hereditary (a circumstance too often industriously concealed even from the physician) I will not presume to determine; but I am free to acknowledge that I have never yet been so fortunate as to see a single instance of a *real hereditary* mania ever perfectly cured by this, or any other medicine.

Bath, Sept. 26, 1786.

ARTICLE XXIV.

The Case of a Burn, and another of Stones in the Kidnies: By STEPHEN LOWDELL, *Surgeon, and* F. M. S.

Read April 18, 1780.

CASE I.

Of a Burn: Exemplifying the great Utility of Cold Applications.

A LADY, who was alone in another room, happened to set her head-dress on fire, she came running for assistance into

into the room where I was, I tore off the head-dreſs as faſt as I could with my naked hand, and thereby burnt it to ſuch a degree, as to be extremely painful. Some oil being brought, I began to bathe my hand with it, and every time I applied it afreſh I found it give me immediate relief; but this relief was but momentary, which I attributed to the oil's getting warm by the extreme heat of my hand, I therefore plunged my hand into the pot which contained the oil, and found the burning heat inſtantly abate, and continued eaſy for much longer time than when the hand was only anointed with it. When the heat began again to increaſe, I imputed it to the oil, which was in contact with the hand, being grown warm, and therefore moved my hand to find ſome colder part of the oil, and this anſwered my expectation; for I found the hand kept tolerably eaſy while the oil remained cold: but at length, as the whole of the oil by this means began to loſe its coolneſs, I found my hand began to be more troubleſomely hot.—I was now fully convinced that the benefit I received aroſe wholly from the coldneſs of the remedy;

medy; I therefore ordered about two ounces of extract of ſaturn, about half a pint or more of oil, and a ſufficient quantity of oatmeal, to make a poultice, to be mixed together in a waſh-hand baſon. While this was preparing, the burning heat of my hand began to increaſe apace, and was at length almoſt intolerable. As ſoon as this cold poultice was ready, I buried my hand in it, and the pain almoſt inſtantly ceaſed; I kept my hand ſtill (unmoved) ſome little time, and then found the burning heat beginning again; I therefore moved it to a freſh place, and found freſh relief, and whenever I found the burning beginning to increaſe, I moved it afreſh, and always found the ſame relief; I continued ſo to do a full hour or more, at the end of which time finding I could keep my hand ſtill a conſiderable time without any uneaſy ſenſe of burning, I wrapt it up in a quantity of the ſame poultice and went to bed: I ſoon fell aſleep, ſlept all night without any ſenſe of pain, and when I awoke in the morning was perfectly eaſy. Upon taking off the poultice, I found two ſmall

veſications

vesications on the side of one of my fingers; but having no soreness, and being rather siliquous than turgid, I did not open them. Being perfectly easy when the poultice had been off some time, I applied nothing either to the hand or finger, and went abroad with only my glove on it, and never after felt the least uneasiness in either; what little lymph was in the vesications was spontaneously absorbed, and disappeared within two days.

Burns and Scalds are some of those kind of accidents in which an early application of the remedy is of the utmost importance: an instant application may prevent the worst of consequences; half an hour, or less time lost in some cases of this kind, may render the best remedies of little or no use.—I cannot therefore conclude this case without earnestly recommending the most speedy applications, and that whatever cold remedies are used in these cases, they should be so often renewed as to be kept always cold to the affected part till the burning heat ceases.

Case II.

Of Stones in the Kidnies.

ELIZABETH F——, ſpinſter, was a long time afflicted with a complaint which ſeemed confined to the urinary bladder; ſhe had much pain there, and voided a turbid urine, which was ſuppoſed to be owing to a purulent or mucous matter mixed with the urine; and theſe complaints were attributed to an ulcer from a ſtone in the bladder. She was ſearched ſeveral different times, and by different ſurgeons, for ſatisfaction in this point, but no ſtone was ever diſcovered. She was under my care ſeveral months, and afterwards was a conſiderable time in Guy's Hoſpital, but never found any relief. She died at the age of twenty-ſix, and I was permitted to open the dead body, in order to ſearch for the diſeaſe. There was no ſtone in the bladder, no ulcer, nor any viſible diſeaſe of that viſcus. I then examined the kidnies, and found in each a very large ſtone,

branched

branched out into a very irregular ſhape; theſe ſtones were both of nearly the ſame ſhape and ſize, and weighed about one ounce each, Troy weight. They poſſeſſed, and wholly filled, or, perhaps, may juſtly be ſaid to have more than filled the *infundibulum* and whole *pelvis* of the kidnies: the part indeed which occupied the *infundibulum* was perhaps not larger than the natural capacity of that cavity, but the part which occupied the *pelvis* extended into the *ſinuſes* of the *pelvis* and tubular ſubſtance of the kidnies, and diſtended them to a ſize far beyond their natural capacities; by this means the ſtones were ſo incarcerated in the kidnies as to render it impoſſible to extract them without dividing the kidnies through their whole length. In the *pelvis* of the right kidney was alſo found a quantity of a purulent kind of matter; but upon a careful examination I could not find any ulceration, abraſion, ſinus, or loſs of ſubſtance. In the left kidney there was none of this kind of matter, and the whole ſurface of the *pelvis* and ſubſtance of the kidney ap-

peared ſound as the right. The ſtone found in the left kidney I gave to that moſt ingenious anatomiſt Mr. J. Elſe, ſurgeon of St. Thomas's Hoſpital, lately deceaſed; the other I have the pleaſure to be able to ſhew to you, but not in the perfection I could wiſh, for having been in careleſs or rude hands, that which was at firſt one complete ſtone, is now broken into ſeveral fragments, and perhaps ſome part loſt.

The above patient never made any complaint that could induce me to ſuſpect the diſeaſe lay in the kidnies, or indeed that there was any diſeaſe there. Her pain was always confined to the lower part of the abdomen. The matter that was found in the right kidney was traceable to the bladder, and therefore I think the kidney muſt be ſuppoſed to be the fountain which ſupplied it; but as there was no ulceration in the kidney, this matter could not be properly called purulent, but only that kind of matter which is ſecreted by glandular parts when

 they

they are in a diſeaſed ſtate: inſtances of which we have in other glandular parts.

From this caſe we muſt ſee, that if this caſe had been known to have been ſtones in the kidnies, lithotomy could have given no relief, how ſafely and dexterouſly ſoever the operator might have cut his way to the ſeat of the diſeaſe.

ARTICLE XXV.

Caſe of a young Lady who ſwallowed a Knife, unattended with any diſagreeable Conſequences: By WILLIAM WHEELER, *Apothecary to the* MAGDALEN-HOSPITAL, *and* F.M.S. (Plate III. fig. 1.)

Read December 30, 1776.

A YOUNG lady, about nine years of age, being at play with a ſmall knife in her mouth, accidentally ſwallowed it.

The knife, when claſped, meaſured in length more than two inches, and in breadth above half an inch, and yet paſſed

Fig. 1.

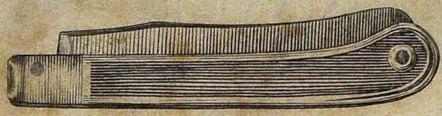

Fig. 2.

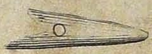

Fig. 3.

the *Oesophagus* almost insensibly; so much so, that the attendants were doubtful of its being swallowed, till they had made every search for it to no purpose.

Her friends being much alarmed, I was sent for immediately, and found my young patient entirely free from pain, or apprehension.

Though her situation appeared to me to be attended with some danger, I endeavoured to alleviate the anxiety of her friends, and recommending all possible attention to be used in search of the knife, prescribed a cooling regimen, with the use of laxative oleaginous medicines. In other respects, trusting the expulsion to nature.

This method produced two stools daily, and yet three days elapsed without any discovery being made; but on the morning of the fourth day, the knife was voided by stool, with as little pain as it had been swallowed: the young lady continued per-

fectly eaſy, as well during the paſſage of the knife, as afterwards.

Soon after the above, I was informed of a ſchool-boy having ſwallowed a ſmall braſs padlock; aſhamed of the circumſtance, he did not mention it till ſome time after the accident, and in this interval it was probably voided by ſtool. On inquiry, he has ſince aſſured me, that neither pain, or any other inconvenience attended the ſwallowing it, but from that time to the preſent he has enjoyed a perfect ſtate of health.

The above circumſtances ſhew the poſſibility, at leaſt, of very irregular bodies, and even of metallic compoſitions, paſſing the inteſtinal canal without producing any diſagreeable effects.

But if theſe caſes, becauſe they have terminated happily, ſhould ſeem trivial in the relation, let me beg the indulgence of the Society.

It will ſcarcely be imagined, I mean to claim

claim any merit in removing the cauſe of complaint, in the caſe which came under my care; but reflecting on the figure of the ſubſtance ſwallowed, the obſtructions it was likely to meet with in the ſtomach and courſe of the inteſtines, and the tender age of the patient, I confeſs to have ſuffered much anxiety for her ſafety.

From this circumſtance, ſhould a ſimilar accident happen in my future practice, it would greatly diminiſh the apprehenſions I ſhould otherwiſe be liable to, knowing the poſſibility of ſo happy a concluſion. And the hopes of communicating to others, what I am perſuaded may be of uſe to myſelf, have induced me to lay theſe facts before the Society.

Baſinghall-Street,
Dec. 3, 1776.

ARTICLE XXVI.

Case of a Spasmodic Affection of the Eyes: Extracted from a Letter to J. C. LETTSOM, M. D. &c. *By* BENJAMIN SAY, *Practitioner of Medicine in* PHILADELPHIA.

Read October 2, 1786.

ON the 11th of May, 1784, at nine o'clock *A.M.* William Scotten, a man of about twenty-eight years of age, made application to me on account of an extraordinary spasmodic affection of the muscles of his eyes; he wore a piece of green silk over the left eye, and as long as that remained, so long he was apparently well, and could see with his right eye very distinctly; but as soon as he removed the covering from the left eye, he was seized with a spasmodic or convulsive motion of both eyes, insomuch that the pupils were preternaturally turned upwards, and inwards, being entirely hid from the sight of

of the obſerver, at which time he was perfectly blind; but as ſoon as the left eye was covered, the ſpaſm ceaſed, the eyes reſumed their natural places, and he could again diſtinctly ſee. This alternate effect of blindneſs and ſight, I could cauſe to take place as often as I pleaſed, by uncovering and covering the affected eye, which I did many times. I tried many ways in order to diſcover whether there was not ſome deception; but found, after repeated experiments, that there was ſomething remarkable in this diſorder: I queried with him a good deal concerning the complaint, he informed me that about twelve years before, he was ſeized with a very ſtrong epileptic fit, which laſted four hours, it then went off, and he was not troubled with any thing ſimilar for about four years afterwards, when it ſeized him again, and continued upon him with different ſymptoms, at intervals, for ſeveral years; ſometimes he would violently clap his hands, and ſtrike at any thing near him, continuing during theſe paroxyſms in convulſive motions; at length

(he informed me) about two months before his application to me, this general ſpaſmodic affection became local, attacking his eyes only. After examining the diſorder attentively, I was induced to believe that the ſeat of the complaint was in the *levator palpebræ ſuperioris* of the left eye, and that the affection of the right, took place ſympathetically from that, for I found by covering the right eye only, that the ſpaſm ſtill continued; I therefore concluded that if I were right in this opinion of the caſe, that by applying ſomething ſedative to the part principally affected, it would prove at leaſt palliative, and indeed would be the criterion, by which I ſhould aſcertain, whether in my conjectures I was right or wrong. The remedy I made uſe of was the liquid laudanum, which I applied externally upon the left upper eyelid; I rubbed it well in for the ſpace of three or four minutes, keeping his eye ſhut during the operation; when to my, and his great aſtoniſhment and ſatisfaction, the ſpaſmodic affection of his eyes effectually ceaſed. He ſat with me for half an hour

hour with the diſordered eye uncovered, without experiencing the leaſt diſadvantage, and as I had ſeveral patients to viſit that morning, I requeſted him to call in the evening to inform me how he had gone through the day; he called accordingly, and acquainted me that he remained quite free from all complaints, and believed that he was perfectly cured. He lives at a diſtance from this place, came purpoſely to conſult me, and if he had experienced any return of this complaint I certainly ſhould have been informed of it.

This caſe appears to be an extraordinary and uncommon one, and as ſuch I do myſelf the honour of communicating it to you.

ARTICLE

ARTICLE XXVII.

Of a Diſeaſe, ſucceeding the Tranſplanting of Teeth: By J. C. LETTSOM, M.D. &c.

Read Aug. 2, 1786.

ON the 23d of Auguſt, 1785, I firſt viſited J. Y——, Eſq. from whom I learned, that about two months before, he had had two of the central inciſores removed, and about a week afterwards, the right exterior inciſor, which were replaced by a celebrated dentiſt from two young women, who were ſuppoſed, by an eminent ſurgeon, to be perfectly healthy, after having made the moſt minute ſcrutiny to aſcertain the fact.

For the ſpace of ſix weeks after the firſt operation, no inconvenience reſulted; but after this period, a painful ſenſation between the two firſt tranſplanted teeth came on: the patient, however, endured it for a week before he made application to the

the ſurgeon, who recommended him to take Peruvian bark and laudanum freely, which he continued to do for the ſpace of another week, when I was conſulted.

When the painful ſenſation I have mentioned, firſt excited the attention of the patient, he recollected that he had been out later than uſual, on the preceding evening, and imagining he had taken cold, he aſcribed the preſent ſymptoms to this cauſe, not having at this time any other motive of ſuſpicion; and the tranſplanted teeth had previouſly acquired nearly a natural firmneſs.

During the uſe of bark and laudanum, for the week prior to my attendance, the pain continued; and an ulceration had taken place in the gums of the interior ſurface of the two firſt tranſplanted teeth, and gradually extended to the root of the right inciſor.

I have already obſerved, that I viſited this gentleman eight weeks after the two central

central incisores had been replaced: the day preceding my attendance, he had felt a slight soreness and swelling of the glands of the neck and throat, which were painful on pressure, but no ulceration was perceptible in those parts.

I found an ulceration interiorly, extending about half an inch from the teeth, on the surface of the roof of the mouth; and longitudinally, the extent of the three teeth; the ulceration had an irregular jagged loose appearance, with livid, sphacelated interstices. The external gums were also, but much less ulcerated, and of a more clean, and less gangrenous aspect; but the whole together was such as would have given me the suspicion of a venereal disease in any other situation. The teeth were become loose, and particularly one of the central incisores; the external one was by much the most firm.

In other respects the gentleman was in a tolerable state of health, of chaste morals, and careful in his mode of living. He had

had very lately before the operation, arrived from the Weſt-Indies, and had not yet acquired the European vigour of health, though not in any ſtate of diſeaſe. Since the firſt ſenſation of pain, he complained of feveriſh heat, and underwent reſtleſs nights.

At my firſt viſit I ordered him to take a grain and an half of opium, and two grains of calomel, at bed time; a draught every four hours, containing a drachm of bark, in powder, and a drachm and an half of Huxham's tincture of bark; and to ſprinkle the ulcerations with a powder of two grains of calomel, and ten of olibanum.

On the 25th, beſides the dentiſt, we had in conſultation three other eminent ſurgeons; when it was concluded to omit mercurials, and to give every four hours a powder, containing a drachm and an half of Peruvian bark, with ten drops of Thebaic tincture, in a ſaline mixture.

Since the 23d, there was very little alteration in the ſymptoms, which, however, were in no reſpect aggravated.

Aug. 26. The ulcerations continue much the ſame; the pulſe is regular; an efflore-ſcence for the firſt time appears on the ſkin: the ſame quantity of Peruvian bark was continued, with twelve drops of Thebaic tincture in each doſe.

Aug. 27. The ulcerations much as before, at leaſt there is no appearance of amendment. The remedies were continued.

Aug. 28. The bark was with difficulty retained on the ſtomach; it was however continued, and four ounces of a decoction of ſarſaparilla ordered to be taken after each powder.

The effloreſcence on the ſkin is almoſt general; of an obſcure red colour, reſembling a ſyphilitick eruption in every reſpect, ſo far as I could aſcertain.

The

The ulceration of the gums do not diminiſh: a lotion of one drachm of cauſtic alkali in half a pint of water, with half an ounce of gum arabic, was directed to be frequently applied to the ulcerations.

Sept. 2. The ulcerations have not increaſed, but rather diminiſhed; the eruption on the ſkin is rather paler; an ulceration of the tonſils is now perceptible; the patient expreſſes relief from the uſe of the lotion; the teeth are very looſe.

Sept. 8. The ulcerations of the gums are more extended, jagged, and ſphacelated; the ſtrength of the patient is greatly reduced; he complains of head-ach and want of reſt, with feveriſh heat in the evening, and profuſe ſweats in the morning. One eye is very much inflamed.

He was ordered to take a quarter of a grain of corroſive ſublimate twice a day, and to apply to the ulcerations a ſolution of three grains of ſublimate in half a pint of water.

Sept.

Sept. 10. The ulcerations increafe; the teeth are ready to drop out of the fockets, particularly the central incifores; the fublimate excites great uneafinefs in the ftomach, and is therefore omitted; both tonfils are become alarmingly ulcerated.

The patient expreffes great diflike to the ufe of mercurials, but is perfuaded to rub upon the legs one drachm of the ftrong mercurial ointment daily, and to drink one pint of a decoction of farfaparilla.

Sept. 12. The complaints are not augmented; but if any alteration is perceptible, it is on the favourable fide. The ointment and farfaparilla are continued.

Sept. 19. There is fcarcely any efflorefcence of the fkin remaining; the ulcerations of the gums and tonfils are greatly diminifhed: the *ophthalmia* is alfo leffened, though there is fome inflammation in the other eye.

Sept.

Sept. 22. The ulcerations and the *ophthalmia* are nearly well; but as the ointment has not produced any ptyalifm, it is continued, and the farfaparilla likewife. The teeth have acquired a tolerable degree of firmnefs.

Sept. 26. The ulcerations are perfectly healed, and every other fymptom of indifpofition has vanifhed; the teeth have acquired a greater firmnefs in the fockets, and the remedies were allowed to be fufpended.

There is fo much fimilarity in ulcerations, that it is not eafy by the moft accurate language to convey a diftinct and clear idea of the different kinds of them, varying as they do, according to their various caufes, to the degrees of virulence, length of time in which they have continued, ftate of the body in which they occur, and other contingencies. Neverthelefs, ulcers depending upon fyphilis, however difficult of defcriptive elucidation, are in general pretty readily afcertained

 from

from their peculiar aſpect, by perſons long converſant with medical practice; and from all the obſervations I have been able to make, I did not heſitate, at the time of attendance, in giving my opinion, that the diſeaſe I have related, was the *lues venerea* communicated by the tranſplanted teeth, which the appearances in the ulcers of the gums, the eruption on the ſkin, the peculiar *ophthalmia*, the ulcerations in the tonſils, and the whole progreſs of the treatment and cure, appeared to juſtify.

Under this perſuaſion, as the mercurials were ſuſpended as ſoon as the ulcers healed, and before the diſeaſe was probably totally eradicated, I intimated this ſuſpicion at the time, to the patient; whoſe ſtrength, however, was ſo far reduced, as authoriſed us to interdict mercury at preſent, eſpecially as he then propoſed to take the tour of the Southern parts of Europe. I recommended him therefore to procure mercurial ointment, prepared without turpentine, and in caſe of the recurrence of the

the diſeaſe, to have immediate recourſe to this remedy.

By the time he arrived at Genoa, which was on the 29th of December, about eight weeks after the ſuſpenſion of the mercurial ointment, the diſeaſe again appeared, with ulcerations of the gums, reſembling, as far as the patient could judge, the former attack, though in a leſs degree, owing probably to the immediate application of mercurial ointment to the throat, which in leſs than a week ſtopped the diſeaſe; after which he uſed it very ſparingly, and concluded his medical regimen with taking a decoction of ſarſaparilla; and he has ſince continued free from diſeaſe to the preſent time, May 1786, when I procured his aſſiſtance in drawing up the preceding relation.

Whilſt I admit the reſemblance of this diſeaſe to the *lues venerea,* I cannot be inſenſible of the weight of ſome general objections, publiſhed by a gentleman, whoſe

great difcernment is univerfally admired[3]; but as I have related the appearances and progrefs of the difeafe, the treatment and cure of it, from notes daily taken, my opinion cannot alter the facts, with which the author I have alluded to was acquainted, and of which the reader may decide upon for himfelf.

I have remarked, that two teeth, the central incifors, were inferted a week before the external incifor; and the difeafe throughout its whole progrefs, feemed to originate from the two former; both of which were very loofe, one indeed was ready to drop out of the *alveolus* upon the flighteft touch, while the external incifor preferved throughout a degree of firmnefs that never afforded any alarm, and the ulceration which extended to it was lefs foul: I fufpect, therefore, that the perfon from whom the other two were extracted, conveyed the *lues*: had the difeafe originated from

[3] See Hunter's Treatife on the Venereal Difeafe, p. 379, 391, 397.

the

the patient, the ulceration would have been leſs partial.

With reſpect to the length of the time, from the application of the cauſe to the appearance of the diſeaſe, I ſee no well-grounded argument againſt the ſuppoſition I have admitted; as that the ſyphilitic infection has lain ſo long dormant, and afterwards exerted its virulence, I have no doubt. Few diſeaſes afford more anomalous ſymptoms than the venereal, and not one ſymptom occurred in the preſent caſe but what muſt have been ſeen in others repeatedly; the colour of the eruption, its acceſſion, duration, and receſſion; the ulcerations of the tonſils; the *ophthalmia*; and every other circumſtance, appeared to me conſentaneous to other inſtances in the *lues*.

It cannot be refuted, that with the utmoſt precaution, the ſcion tooth is ſtill a living tooth, has the principle of life ſo far preſerved, as to unite with the veſſel of the new *alveolus*; and, conſequently, if it

retains a diſeaſe with the living principle, it may alſo convey this diſeaſe to a body, of which it becomes a living member; but perhaps from the hardneſs of its texture, and its ſlow union with the parts to which it is thus nearly allied, it may be longer in conveying the poiſon which it carried from its original ſeat; and this may remove a doubt which has been raiſed reſpecting the lapſe of time between the inſertion of the tooth and the appearance of the diſeaſe.

We never have had any inſtance recorded of ſuch a diſeaſe ſucceeding the inſertion of dead, or of ivory teeth; a dead tooth, whether loſing its living principle, in its original ſeat, without removal, or a dead one, inſerted into the *alveolus* of another perſon, acquires a colour and appearance totally different from a living tooth, whether an original or a trnſplanted tooth, The argument therefore of ſoaking and cleanſing the tooth, conſtitutes no proof againſt the probability of communicating the diſeaſe, as long as the tooth retains the living principle, capable of forming an union with

with the parts into which it has been inſerted, by a ſpecific medium of circulation, ſuch as exiſts in the natural ſtate; unleſs it be contended that the teeth are incapable of retaining the venereal diſeaſe, which, however, cannot be argued by any analogy, for the diſeaſe ſeems to be particularly determined to ſome of the hard bones of the body, as the *tibia*, *cranium*, &c. and ſometimes remains latent for years, poſſeſſing at the ſame time the genuine ſyphilitic powers; but ſuppoſing the teeth incapable of retaining and communicating the diſeaſe, ſtill the nerves and fleſhy parts about them may do it effectually.

That this diſeaſe ſhould ſucceed the tranſplanting of teeth, conveys no cenſure upon the dentiſt who performed the operation, as every precaution to obviate ſuch an incident was adopted: the perſons from whom the teeth were extracted, were minutely examined by an eminent ſurgeon, and the tranſplanted ones were ſoaked in lukewarm water for about an hour

 before

before they were inserted into the *alveoli* of the gentleman.

It is certain, however, that instances have occurred with other operators wherein such precautions have not been taken, perhaps from an opinion that the more quickly the transition was made, from extracting to inserting a scion tooth, the greater was the probability of the transplanted tooth fixing into the *alveolus*[t]. Dr. Hamilton, of Ipswich, to whom I had communicated the foregoing case, has favoured me with an account of two unfortunate cases that fell victims to this practice, which I shall annex.

From what I can collect, in an extensive inquiry into the practice of transplanting teeth, about one in every twenty have had the disease, and of these about one

[t] "It will be hardly necessary to mention that the "sooner the scion is put into its place the better, as "delay will perpetually lose the power upon which the "union of the two parts depends."

Hunter on the Teeth, v. ii. p. 102.

fourth

fourth have died. It is true, that in ſome of theſe fatal caſes, mercury had been uſed, but it has been in ſuch only, where the patient had been debilitated to an extreme degree, and never where it had been exhibited early, or whilſt a good ſhare of ſtrength remained, ſo far as I know: every perſon acquainted with practice, very well knows, that in ſome inſtances of the *lues* in the common way, the application of mercury will not cure; and, indeed, where the cortex and other tonics have afforded more benefit; but ſuch inſtances are comparatively rare, and form no proof againſt the general efficacy of mercury in the *lues*.

As the ſpecies of diſeaſe I have deſcribed, has not been noticed in this kingdom above ten years, owing probably to the novelty of tranſplanting living teeth, I have given my opinion in the foregoing pages with more heſitation; for had it not been for the circumſtances attending other patients, who have had ſimilar ulcerations of the gums after the operation, I ſhould not have entertained any doubt of the ſyphilitic nature of the preſent caſe.

The eminent writer, whoſe authority I have already noticed, has related ſeveral examples, which lead one to doubt the real exiſtence of the *lues* in this peculiar diſeaſe of the gums.

Profeſſor Kuhn, of Philadelphia, whoſe amiable character is univerſally eſteemed, and whoſe authority is inferior to none, has lately favoured me with the following caſe of ulceration of the gums ſucceeding the tranſplanting of teeth, which happened in Philadelphia.

"SIR,

"I HAVE until this time delayed to acknowledge the favour of your letter, from an expectation which I entertained, of being able to furniſh you with ſeveral caſes, ſimilar in their conſequences, to that of Mr. J. Y——; but after the moſt diligent inquiry, thoſe caſes, of which I had heard various accounts, proved to be entirely

tirely local, and indeed confined to the jaw-bone. One caſe which I attended was in many reſpects ſimilar to Mr. Y——'s, and of this the following hiſtory will determine your opinion.

" A married lady, in this city, had two teeth inſerted into the upper jaw by Mr. Le Mayeur, a celebrated dentiſt; theſe ſucceeded extremely well. After ſome time a third was likewiſe inſerted; but this was never perfectly fixed or firm, though for ſix weeks ſhe felt no kind of inconvenience. She then began to complain of a ſtricture about the fauces, and ſome ſymptoms of a ſore throat, with a ſlight ulceration of the tonſils, which ſhe attributed to cold, and for which ſhe loſt about eight ounces of blood from the arm. This not affording her any relief, my attendance was deſired: I found the glands in the neck conſiderably ſwelled and hard, the gum about the laſt inſerted tooth livid, with a loſs of ſubſtance, and the tooth itſelf much looſer than it had been for ſome time; a ſlight fever accompanied the ſymptoms, attended with

with a loſs of appetite, and ſome degree of nauſea ; after ſome days, eruptions appeared over the whole body, and particularly on the arms, and in the palms of the hands, covered with furfuracious ſcales, which were ſoon renewed if removed by deſign or accident. There was no room for even ſuſpecting that ſyphilis could have been the ſource of any of the ſymptoms, and I therefore concluded that the irritation from the laſt inſerted tooth had occaſioned the various ſymptoms of the diſorder. The gum was repeatedly ſcarified, external remedies were applied to the ſwelling in the neck, to prevent an abſceſs, which there was much reaſon to apprehend, and ſmall doſes of neutral ſalts were adminiſtered to moderate or relieve the fever. But though her complaints did not grow worſe under this treatment, I had, after two months attendance, the mortification to find them no better, and therefore adviſed the removal of the tooth, as the only method that appeared to me effectual to relieve the complaints. This, after ſome heſitation, was complied

complied with; the gum in a few days healed and became perfectly ſound; the ſwelling in the neck abated by degrees; the eruptions vaniſhed, but ſo ſlowly, that it was ſeveral months before they diſappeared entirely. She took a few doſes of bark daily for about a week, to reſtore tone and vigour to the ſyſtem, which had been very much impaired by anxiety and diſtreſs of mind as well as by the diſeaſe."

Philadelphia,
May 5, 1786.

Under authorities of ſuch acknowledged reputation, there certainly remains a difficulty in deciding upon the nature of the diſeaſe. We know by experience, that mixing two companies of people together, will occaſion a diſeaſe that did not apparently exiſt in either. Dr. Blane repeatedly remarked that fevers prevailed upon mixing the crews of one ſhip to make up the compliment of another, which would not in all probability have occurred to either had they

they been kept diſtinct. In the winter vacation of the year 1785, I attended many children, who left ſchool in apparent health, who were attacked with a low nervous fever ſome time after coming home to their friends, where I could not deduce the indiſpoſition from any indulgence or irregularity in the families. This was not peculiar to the children of one ſchool, but happened to thoſe of different ſchools; and was indeed ſo general as to be diſtinguiſhed by ſome phyſicians by the name of ſchool fever.

I have often known inſtances of dentiſts having drawn through miſtake a ſound tooth inſtead of the decayed, which upon being inſtantly replaced into the ſocket has become again firm and permanent; but in no inſtance whatever has this diſeaſe been produced; if therefore the diſeaſe be not ſyphilitic, may it not depend upon bringing together the principles of two different conſtitutions, one of which may poſſeſs a pre-diſpoſition to morbid affection?

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Were it neceſſary, analogy might favour this theory, from the influence of various infectious diſeaſes; but as we have not had ſufficient experience reſpecting the true nature and cauſe of the diſeaſe ariſing from tranſplanting teeth, any deductions from this practice muſt, at preſent, be unſatisfactory. It is however a pleaſure to know, that whatever be its cauſe, mercury appears capable of effecting its cure.

Letter from Dr. HAMILTON, *of* IPSWICH, *to* Dr. LETTSOM.

"I DO not find, on inquiry, the diſeaſe occaſioned by tranſplanting teeth from one perſon to another, ſo new, nor altogether ſo uncommon, as I at firſt ſuppoſed; and the peruſal of your laſt favour convinces me, that it ſeems more from our inattention and the want of obſervation, than from its non-exiſtence, that it has, till lately, eſcaped the notice of medical men. I am now furniſhed with a caſe, which happened more than ten years ago,

ago, to corroborate, in part at leaſt, this aſſertion.

Talking on the ſubject with a gentleman of this place, ſince the publication of the third volume of the College Tranſactions, wherein Sir William Watſon has related a caſe, and which ſeems to have been the firſt noticed, he aſſures me, that a ſimilar complaint was experienced by a young lady of his acquaintance, which aroſe preciſely from the ſame cauſe.—It was as follows:

A white, and an apparently ſound tooth, was taken from the jaw of a ſeemingly healthy perſon, and immediately tranſplanted into the jaw of the lady. Soon after which ſhe began to complain of pain, grew daily worſe, ulcers appeared in the gum where it was inſerted; theſe ſpread, ſunk deeper, communicated to her upper and under jaw, fauces, and tonſils; diſcharged a fœtid ichor, and rapidly continued their ravages, till in no long time after, not only the roof of her mouth, but both upper and under lips

were

were conſumed; her teeth alſo fell out, for the *alveoli* became carious, and ſhe appeared a ſpectacle ſhocking to behold: ſhe lived ſome conſiderable time, however, before death put a period to her miſeries.

"We are told of the great care taken by the dentiſts to obtain teeth from ſound perſons; how the ſtricteſt inquiry is made relative to this, before they proceed to the extraction of the tooth; and how, that even when they are fully ſatisfied on this point, they do not ſtop here, but proceed further: they ſoak it well in warm water, and they carefully wipe it clean and dry, before they inſert it into the deſtined jaw.

"I doubt not, but this may be, for the moſt part, ſtrictly true; and that the generality of dentiſts ſcrupulouſly and conſcientiouſly adhere to this plan, I mean ſuch as have a character which they wiſh to maintain; but it is feared, there may be exceptions, and that there have been thoſe who paid leſs regard to this neceſſary precaution.

"The gentleman who favours me with the relation of this caſe, ſays, he knows inſtances where the tooth has been taken warm from the one jaw, and the next moment inſerted into that wherein it was deſtined to remain, without any ſuch precautions as theſe being obſerved.

"But the fatality that has attended Sir William Watſon's patient, with the fatality of this I have related, and the brink of death on which your own ſtood, who, I truſt by this time, is removed from all danger, will, it is to be hoped, operate ſo forcibly on the practitioners in this branch, that no poſſible precaution will hereafter be neglected, that can obviate ſuch evil tendency.

"I would not, from theſe caſes, entirely condemn the practice of tranſplanting teeth; I am authoriſed from another correſpondent of obſervation, to aſſert, that it has been attended with utility. That at the end of five years from the operation, the tranſplanted tooth neither ſhowed ſigns of decay, nor did pain, or any other evil tendency,

tendency, to create an alarm, during this period, ever ſucceed.

“ Notwithſtanding this, it may be perhaps as ſafe, not to run the riſque for every trifling blemiſh in this part of the human fabric. A little black ſpeck, of no importance even to beauty, or a tooth not ſtanding altogether ſo exactly in a row with its fellows, ſhould by no means tempt any one to hazard its removal for another, though more beautiful to the eye, which may in a ſhort time be the cauſe of diſeaſe and pain, if not death.

“ That it is the ſyphilis, or confirmed pox, which moſt frequently takes place from this operation, there appears to me ſome reaſon to conclude; and this is ſtrengthened as well from the frequency of venereal taints in both ſexes, as from conſidering what ſort of perſons they are, who, for the ſake of a bribe, ſubmit in this way to the loſs of their teeth: their ways of life, and other circumſtances, give room for ſuſpicion on this head.

" In the case related by Sir William Watson, it yielded to nothing but mercury [u]; the ulcers, after the use of this mineral, soon began to look better; but a proper quantity could not be administered, for the patient's strength was too far exhausted before the trial was made.

" Daily experience proves, that in the advanced stages of syphilis, mercury does not always succeed; every part of the system may be so weakened by the disease, that the operation of this medicine cannot be born; before a proper quantity be thrown in, some symptoms may be induced, which will oblige the physician to desist from its further use.

" But the person from whom the tooth was extracted, as related by Sir William Watson, had no appearance, either on the pudendum, or tonsils, of this affection: an

[u] Mercury, we grant, cures other diseases besides the *lues*: we do not, therefore, insist on this as an argument, we must look further; this will neither prove for, nor against, the disease being syphilis.

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eminent ſurgeon had made the examination. We may, however, be allowed to remark, how difficult it is, abſolutely to determine againſt the preſence of this infection; and this will appear more ſtrong when it is conſidered, how ſmall the quantity is that can communicate the taint, or how far the ſyſtem may be charged with it at the time, though not obvious to our ſenſes [w].

" Though I am inclined to doubt, whether blood is at any time, of itſelf, capable of communicating either this or ſome other infectious diſeaſes, at leaſt till

[w] A ſurgeon of character in this town, lately told me of a caſe of ſyphilis, where not the leaſt appearance, either of it on the private parts, or any other part of the body, ſhewed itſelf for upwards of ſix years. About this time the patient, then a bachelor, contracted the venereal diſeaſe—was cured to all appearance—afterwards married, and his wife bore children to him; neither ſhe, nor they were ever affected: an ulcer now appeared, and he was perfectly cured by mercury. He ſolemnly proteſted, he never had connection with any woman but his wife, ſince his marriage. This proves how long it may remain dormant in the habit, and at length break forth with all its virulence.

more satisfactory proofs appear from accurate experiment; yet it might prove the medium to convey the poison, which it is not beyond probability to suppose. It might be received from some small ulcer undetected about the root of the tooth, at the time of extraction. But the tooth was well washed and wiped, and consequently all the poison removed: this is a difficult matter to determine. If a small ulcer be allowed, the remains of which was not carefully cut, or scraped away, the unsound part might even after all this precaution retain enough of the vitiated ichor to inoculate the person into whose jaw it was inserted.

"The syphilis attacks not only the soft parts, but the bones, and most commonly those of the closest and hardest texture: both Sir William Watson's patient, and the patient mentioned here, had the bones consumed. I insist not, however, on this mode of reasoning, but throw out these hints as probable conjecture; yet the conclusions,

clusions, as inferred from the premises, would seem not to be altogether unnatural."

"P. S. I have within this hour been informed of another case of transplanted teeth followed by death. It happened more than seven years ago, which is a further proof that Sir William Watson's case is not the first of the kind. A respectable clergyman assures me of the fact; the subject likewise a lady, and the operator, a dentist that lived in Bond-Street, London; he also tells me, that little care was formerly taken by the dentists, and that he knows the common practice was, to insert the tooth into the destined jaw, warm from the jaw whence it was extracted. The opinion was, that the blood assisted in fastening the tooth both more speedily, and more securely. He does not at this distance of time recollect whether the tonsils and palate were affected; but he can never forget the shocking appearance of the poor sufferer. The practice, it seems, has been to obtain fine white teeth, without paying much regard to the person from whom they

they took them. Little chimney-ſweep boys became more frequently than others, the victims from whom teeth might be obtained for a ſmall trifle, ſometimes a ſhilling, or, at moſt, half a crown: no wonder, if diſeaſe was the reſult of ſuch promiſcuous and inattentive proceedings.

ARTICLE XXVIII.

Remarkable Effects of Cantharides in Paralytic Affections: In a Letter to the MEDICAL SOCIETY *of* LONDON: *By* J. VAUGHAN, M.D. C.M.S. *and Phyſician to the* LEICESTER-INFIRMARY.

Read October 16, 1786.

PARALYTIC caſes come ſo often under the notice of the phyſician, and ſo frequently prove ſuperior to his ſkill, that, I truſt, any remedy which promiſes to be of uſe in ſo dreadful a malady will be received both with candour and thankfulneſs

nefs by the medical world. It is true, that our knowledge of the nervous fyftem, and of the means by which it performs its refpective functions, is at prefent very imperfect, and reduces our practice very frequently to a kind of creditable empiricifm; yet facts will always have their weight, and will ferve as ufeful guides to us when a cafe occurs fimilar to that which I fhall make the fubject of this paper; and which I felect as the moft important of very many, which have come under my cognizance, when the fame means have been employed. The remedy I am about to fpeak of made a noife, as we very well know, fome years ago, and the gentleman, who ventured to employ it, fubjected himfelf to cenfure. A more enlightened philofophy has, in the prefent day, removed many of our prejudices, and made way for the introduction of various articles into the Materia Medica, heretofore accounted deleterious, and not applicable to any good purpofe. Of this number was *cantharides* given as an internal medicine; but, I truft, it will appear from what

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I am going to relate, that *cantharides* may be exhibited in ſubſtance, not only with ſafety, but with advantage; without any further remark, then, I haſten to my narrative.

A luſty and healthy young man, aged twenty-one years, being violently heated, threw himſelf on the ground, and fell faſt aſleep. He was found, after ſome hours, utterly incapable of voluntary motion, ſenſeleſs, with great coldneſs of the limbs and ſurface of the body; he was deprived of the power of ſpeech, and his water flowed involuntarily. In this ſtate his friends applied to an apothecary for aſſiſtance, who bled him, gave him a purge, and placed a bliſter upon his back. I found him with a very conſiderable degree of ſtupor, a frequent unequal reſpiration, and a pulſe ſlow and feeble.

March 28. As he had had no ſtool for ſome days, a warm ſtimulating clyſter with *tinct. ſacr.* and *tinct. jalap.* was immediately adminiſtered. The whole head was covered with a bliſter, as was alſo the *ſacrum*,

ſacrum, and a volatile liniment with more than the uſual quantity of *ſpt. ſal. ammoniac, cum calce vivâ*, was applied to the region of the *pubis*, to the ſpine of the back, and to the lower limbs. A bolus conſiſting of a ſcruple of volatile ſalt, as much of the *elect. cardiac. p. e.* with a grain of *cantharides* in powder was ordered to be taken once in ſix hours, which was to be waſhed down with a ſtrong infuſion of valerian, horſe-radiſh, muſtard-ſeed, and *canella alba*. This plan was continued for three ſucceſſive days, without its producing any viſible effect.

On the 31ſt of March, the volatile ſalt and the cordial electuary were each increaſed to the quantity of half a drachm, and the grain of *cantharides* was added to it as heretofore; but inſtead of once in ſix hours, the bolus was ordered to be repeated every three hours, with the infuſion as before directed.

On the 4th of April, not having gained any material advantage, his clyſter being firſt

first repeated, ten grains more of the volatile salt, making in the whole [u] two scruples, and a second grain of *cantharides* were added to each bolus, which was to be repeated every three or four hours until some manifest effect was produced. This method he pursued until the 6th of April; in the evening of that day he became very restless, was able to toss himself about,

[u] I doubt not but two scruples of volatile salt will be considered by most people as a large dose of that medicine; but on the authority of Van Swieten, who speaks favourably of it in paralytic cases, I some years since began with giving a patient, who laboured under Paralysis, first of all, a drachm in half a pint of water gruel fasting; this producing no effect, two drachms were given, then three, and, at last, half an ounce in the same quantity of gruel. This dose was continued for three weeks, without producing either good or evil, and the patient made no complaint of it but that it heated the fauces, and warmed the stomach for a short time. In this state, having continued the volatile salt in such doses and for so long a time, I ordered some blood to be drawn from the arm, with a view to determine what effect it had produced on that fluid. The blood was of a more florid colour than usual, but its texture not in the least broken; on the contrary, I thought, after standing many hours, that it yielded less serum than common, and the crassamentum was rather firmer than ordinary.

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and though not to articulate any words, yet he made a great noiſe expreſſive of much pain, frequently applying his hand to the region of the *pubis*, as though it was the part more particularly aggrieved; but he was ſtill incapable of giving any account of himſelf. The bliſter was now removed from the head, and the part waſhed clean; a poultice of bread and milk with ſome oil was applied to the bliſtered part of the *ſacrum*, and his medicines were omitted. In the place of which, he was now directed to drink freely of barley-water, well loaded with gum arabic. In three days time all theſe painful ſymptoms were entirely removed, he was become quite ſenſible, could retain his water, and the following day could ſtand when ſupported by two people; but his countenance betrayed ſtrong marks of the injury the brain had ſuſtained, and beſpoke a degree of fatuity.

On the 9th of April, he was directed to take once in eight hours a bolus, with a ſcruple of gum guaicum, as much vola-

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tile ſalt, and one grain of *cantharides*, drinking with it the infuſion of valerian, &c. A ſeton was made in his neck, and ſtimulating plaſters were applied to the ſoles of his feet. He continued in this method until the 21ſt of April, mending every day. He felt no inconvenience from the *cantharides* taken in this quantity; he ſlept well, eat his food with an appetite, and his bowels did their office with regularity. His intellectual faculties were however much impaired; he had forgotten how to walk; when he attempted it, it was with the awkwardneſs of an infant; and he had even his letters to learn again. Every thing which had paſſed ſince his firſt ſeizure had not left the leaſt impreſſion upon the common ſenſory; and there will in all probability be a ſpace of time, of the duration of ſix weeks, which will remain a blank in his life. In proportion, however, as he gained his ſtrength, his mental faculties were reſtored; he could now walk with a ſtick, but his limbs were very feeble, and he ſtill continued to drag them after him; he had alſo little or no uſe of his left hand and

arm. Notwithſtanding this, it was very obſervable that he gained ſomething every day; by the 4th of May he was able to walk tolerably well, but the weakneſs in the left hand and arm ſtill continued, though not in near ſo great a degree. He was now ordered an aromatic electuary with ſteel, with a warm decoction of bark, to which was joined the daily uſe of the cold bath. By bathing and theſe remedies, he received ſpeedily the moſt eſſential advantages; for by the 12th of May nothing remained of his diſeaſe, except a trifling weakneſs in his left hand, the entire uſe of which he ſoon after recovered, and had no longer occaſion for any medical aſſiſtance.

I have thus, Gentlemen, laid before your Society, and through your means the Public, an account of the effects of *cantharides* given internally, and, in this inſtance, with ſingular advantage. The caſe was a deplorable one, and the action of the remedy ſomewhat alarming. I have ſince the occurrence of the above caſe,

been

been in the habit of giving *cantharides* in paralytic cases with various degrees of success, and sometimes with none at all; but I generally begin with half a grain for a dose, and it seldom happens that a patient will bear more than two grains in twenty-four hours; whenever any inconvenience arises from its stimulating too much, a suspension of its use for a day or two, and allowing the free use of milk and water as a diluent, soon removes the troublesome symptoms. In a case where there was an incontinence of urine from a paralysis of the *sphincter vesicæ*, I gave it, in conjunction with the bark, to the amount of nine grains in the twenty-four hours, but without any good effect, or, indeed, any effect at all. I trust, however, that I have said enough to shew, that *cantharides* affords us a remedy which may be employed with safety, and that its failing sometimes to do, what we want from it, only reduces it to a level with some of the most celebrated and powerful articles of the Materia Medica.

Dr. VAUGHAN'S *further Remarks, in a Letter to* Dr. LETTSOM.

"YOU will readily allow, I dare ſay, that inſtances of what we call the Sea-Scurvy, occur but ſeldom on ſhore, and eſpecially in the interior parts of our iſland; yet in the courſe of five and twenty years, I have ſeen four, the laſt of which occurred very lately: in this inſtance, blood iſſued from the gums and fauces conſtantly, of a black ſooty colour; the body was covered with *petechiæ* and *vibices*, and on the third day, a pain in the loins made me ſuſpect that the ſame diſeaſe would ſhew itſelf in the kidney: this it actually did in the courſe of the night. What came from the kidneys and bladder, during the night, in quantity about three half pints, was perfect *cruor*, which did not ſeparate into *craſſamentum* and *ſerum*, but reſembled ſoot diffuſed in water, more than any thing elſe. Bark and alum given with the utmoſt freedom; the mineral acids, fixed air, all taken in large quantities, with a nouriſhing antiſeptic diet,

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made no impreſſion upon this diſeaſe; but three pints of juice freſh expreſſed from oranges and lemons, taken in twenty-four hours, brought on an amazing change, and in four days put an entire ſtop to the diſeaſe; and the patient continues perfectly well.

ARTICLE XXIX.

Of an Injury in the Hand, ſucceſsfully removed: By THOMAS POLE, *Surgeon. Communicated by* J. C. LETTSOM, M. D. *&c.* *See Plate* III. *fig.* 2, *page* 322.

Read September 20, 1786.

MARY ANN TUDOR, late of London, but now of the Crown Inn, Reading, when about ten years of age, was playing with an ivory bodkin, and accidentally thruſt it into the palm of her right hand, in which incident the inſtrument brake at the eye, about ſix-eighths of an inch in length; and was buried under the integuments about the flexor tendons. She applied to a ſurgeon of the town

town for aſſiſtance, who, either not informed of the particulars of the extraneous body being there, or elſe not capable of diſcovering it, attempted to heal the wound ſuperficially; but the patient finding an acute pain in the part, and a frequent weeping of matter from a ſmall ſinus, and that the arm at times became very painful and ſwollen up to the axilla, ſo as to oblige her to cut the ſleeve open to undreſs herſelf, ſhe came to London for further aſſiſtance, where ſhe was ſeen by ſeveral ſurgeons of eminence, who probably did not ſuſpect the cauſe of the diſeaſe, and ſhe returned to Reading without relief; at which place ſhe was under the care of different ſurgeons, but with no better ſucceſs.

In the autumn of 1786, being at Reading on account of an operation on a patient there, this young woman was introduced to me for my advice. I was unwilling to ſuppoſe, that all the judicious practitioners whoſe opinions ſhe had procured, had overlooked the probability of

the body remaining in the part; naturally ſuppoſing their own ideas, from the hiſtory of the caſe, would have ſuggeſted the neceſſity of an operation to extract it; and conſidering the years which elapſed ſince the accident, I, indeed, was ready to conclude it impoſſible, to have remained ſo long in the part, and could ſcarcely admit the idea which the other ſymptoms of the caſe afterwards obliged me to entertain; as the lancinating pain, frequent ſwelling, and inflammation, and the continual weeping of the ulcer; but finding no ſymptoms of ſcrophula, however improbable it might at firſt have appeared, that a portion of the bodkin, remaining in the part, excited the diſeaſe, I concluded it to be ſo; and upon opening the hand, the operation confirmed the propriety of the determination; and I extracted the piece as before mentioned, unaltered in its colour, or appearance in any reſpect; and the wound was perfectly healed in about a week, to the grateful ſatisfaction of the patient and family; for the hand and arm had been, in a great meaſure, uſeleſs for the ſpace of *fifteen* years.

ARTICLE

ARTICLE XXX.

Caſe of a Biliary Calculus: By J. C. LETTSOM, M. D. &c. *See Plate* III. *fig.* 2, *page* 322.

Read September 4, 1786.

MAJOR B———D, of Jamaica, had laboured for many years under a ſevere pain about the region of the præcordia. After twelve years thus grievouſly ſuffering, he came purpoſely to Europe to ſeek for relief. Between the tropics this diſeaſe had been called the gout; and probably under the ſame perſuaſion, the phyſicians he conſulted in London, recommended him to try the Bath water; he acquieſced, and after a ſufficient trial he returned to London, with an increaſe of his ſufferings; he had, however, intervals of eaſe, occaſionally, for the ſpace of a week or ten days: it was in one of theſe periods that I accidentally met with him at

the houſe of one of his tranſ-atlantic country-women; and as perſons who have ſuffered much, are apt to communicate their feelings, he hinted to me ſome of his miſeries. I caſually ſuggeſted an opinion, that inſtead of the gout, he might labour under gall-ſtones. After this I ſaw him no more till about three weeks afterwards, when he ſent for me to Iſlington; he was there under the attendance of my judicious friend Hole, of Iſlington, an eminent ſurgeon, who had endeavoured to mitigate his pain by laudanum. The Major was at this time tormented with dreadful ſpaſms, which the warm bath, and three hundred drops of Thebaic tincture, ſcarcely calmed. This opiate he took daily, as it gave ſome reſpite to a moſt diſtracted frame; at the ſame time, caſtor oil, though often vomited, was frequently repeated to promote ſtools; and for the ſame intentions, purgative and anodyne clyſters were adminiſtered, as the ſpaſms, or the conſtipation indicated. After four days ſtruggling, with the aid of opium, againſt the rack, he diſcharged by the rectum,

rectum, a firm hard calculus, under the following circumſtances:

Length, Two inches and a quarter.
Circumference, Three inches and a quarter.
Weight, One ounce, two drachms, and twenty-three grains.

I did not cut into the calculus, as the Major was deſirous of preſerving it entire. It had the external appearance of a brown flint ſtone, though of leſs ponderoſity in proportion to its magnitude.

After this calculus was diſcharged, the patient continued for ſome days under violent ſpaſmodic affections, for which laudanum was ſtill freely continued, as, doubtleſs, the ſtone in its exit muſt have injured the tender parts through which it had its egreſs: at length, eaſe was procured, and health gradually reſtored; and the Major happily returned to his family, which he left, conſiſting of twelve children and an aſſociate ſtill more dear.

ARTICLE XXXI.

Case of Angina Pectoris, from an unexpected Disease in the Heart: By JAMES JOHNSTONE, M. D. C. M. S. &c.

Read December 17, 1786.

THE Reverend Gregory P—y, prebend of Worcester, &c. somewhat under the middle size, with a short neck, and inclined to corpulence, of a cheerful and social temper, had enjoyed very good health till after his sixtieth year; it was some time after this, that the extracting the chrystaline humour, which became cataractous and opaque in both eyes, was performed by Baron Wenzel, so as to secure him the sight of one eye to the last. He found the sensation during the operation like an uneasy tickling, rather than pain, properly so called, and went through it with spirit.

He

He conſulted me in the ſummer of 1783, for a pain in his ſtomach, which ſeeming to be only flatulent, and to ariſe from indigeſtion, eaſily yielded to draughts of the warm ſtomachic kind, with *tinctura ſacra*; returns of ſuch uneaſy feelings in the ſtomach were not unuſual nor unfrequent after this, but always yielded to the uſe of theſe draughts. He had, at this time, a pulſe remarkably ſlow, though very regular, which made me intimate to his family, conſidering his make and age, the propriety of precautions, if any thing like giddineſs or pain in the head ſhould appear to threaten apoplexy. Nothing, however, of this kind happened, and no appearance or ſymptom ſuggeſted his having the *Angina Pectoris* till after his return from a viſit to London.

In June laſt, he complained of ſhortneſs in breathing, with pain in his cheſt and acroſs to his arms, on walking, eſpecially up any aſcent; and, of ſuch complaints he had frequent returns in the months of June and July, notwithſtanding bleeding, a briſk

a brisk cathartic or two, and some other medicines were ordered, besides the repetition of the stomachic draught, of which he had a good opinion from the relief he had received from it; and now, I plainly saw he was affected with a disease which has proved so constantly fatal, and expected sooner or later, to hear of the sad event.

Just before he left Worcester, he had a short and slight fit of gout, which seemed to relieve him, and gave me some encouraging hope; indeed, he remained free from this complaint till he had been in Wales; but a short time afterwards, the fatal symptoms returned more than once previous to the attack which suddenly ended in death.

That evening, the 2d of August last, he seemed cheerful and well; but after being some time in bed, he complained he was very ill, and sat upright in it; but after his *tinctura sacra* draught, he seemed easier,

eaſier, and Mrs. P—y heard no more complaint till ſome time afterwards.

Early in the morning of the 3d of Auguſt ſhe was rouſed by the noiſe of his expiring groan: in fact he was dead in an inſtant, and I believe had entered the ſeventy-firſt year of his age.

His body being opened the 4th of Auguſt, by Mr. Gunter, Surgeon, in Brecon, the following is a very ſenſible account of what he obſerved, which I give in his own words.

"SIR,

"AT the deſire of Mrs. P—y, I beg leave to inform you of the appearances attending the diſſection of the late Mr. P—y. The inteſtines were in a natural ſtate, but much inflated with wind; ſtomach covered with a very black mucus, quite empty, very much diſcoloured, in many places black, particularly about the *pylorus*; the blood veſſels over it very much diſtended; the liver indurated in every part,

part, but moſtly ſo about its edges; the heart very putrid, admitting my fingers paſſing through it with very little preſſure, it was quite empty, and the veſſels going to and from it perfectly ſound, and no oſſification; the lungs ſound, not even an adheſion; the *pancreas* ſomewhat hardened; kidneys very much diſeaſed, hardened in every part; the *pelvis* with difficulty diſtinguiſhed, it was covered very much with fat highly tinged with bile—theſe are the whole appearances.

W. GUNTER."

Brecon,
Oct. 2, 1785.

This diſſection ſhews another almoſt unſuſpected cauſe of ſudden death. This gentleman laboured under; firſt, the complaints of indigeſtion, a flatulent pain with which he had been long troubled before any ſymptoms of *Angina Pectoris* were heard of; to ſuch complaints the diſordered ſtomach, the diſcoloured *pylorus*, inflated inteſtines, and even hardened liver

liver (he had no icteric colour) have an obvious and cloſe connection.

Second. The ſymptoms of *Angina Pectoris*, which troubled our patient in the laſt three months of his life, plainly aroſe from, and were ſymptoms of, defect of power in the heart. From what cauſes, or cauſe, the putridity or diſpoſition to mortification which ſeized this vital muſcle aroſe, may not be very clear; but that ſuch a ſtate muſt render it unfit for its office of carrying on the circulation of the blood, or, in other words, of ſupporting life, muſt be evident.

The heart being inſenſible, even its diſeaſes are attended with no proper ſenſe of pain, peculiarly felt in this part; a thouſand experiments, as well as accidents and caſes, have eſtabliſhed this fact; but that peculiar ſenſation of weight and agony, with difficult breathing, and pains extending to the arms, and pectoral muſcles, on attempting to move: in ſhort, a ſenſe of failing life, when the heart, from any diſ-

eaſe

ease affecting its mechanism, and disturbing its motions, is hindered in distributing or propelling the blood, through the pulmonary artery and lungs into the left ventricle of the heart, and from thence into the aorta and the whole body, seems to be the symptoms of danger in this organ. It is in this state so immediately threatening to life, in this convulsive, agonizing struggle for existence, that the cardiac nerves, derived from the thoracic ganglions of the great sympathetic nerves, are stimulated in an extraordinary manner indeed, and that all the wide-extended connections of the sympathetic nerves, particularly those in the chest and superior extremities, are irritated thereby into painful spasms, such as are felt in the *Angina Pectoris*, though least of all felt in the organ from whence they originate, the heart itself.

I think it quite unnecessary here to shew from approved anatomical works, that the cardiac nerves have the origin and connections here taken for granted. I suppose my readers neither to be ignorant nor cap-

 tious:

tious: my learned friend the late Dr. Wall, reaſons in the ſame manner. See *Med. Tranſ.* Vol. III. alſo, *Lanciſi de motu cordis & aneuriſmatibus*, *Vieuſſens neurographia*, and the tables of Walther on the *Viſceral nerves.*

But inteneration of the heart from putridity ſometimes has been the occaſioning cauſe of ſudden death, by rendering the ventricles of the heart liable to rupture: of this accident our late Sovereign George II. died at an advanced age; and in a Memoire, by M. Morand, in the Memoires de l'Academies des Sciences de l'an 1732, concerning remarkable accidents in the organs which carry on the circulation of the blood, he mentions the caſe of the Ducheſs of Brunſwick, who died of a rupture of the right ventricle of the heart, in 1730; and that of a perſon of condition, examined by himſelf, who died the ſame year of a rupture of the left ventricle of the heart; and he adds "Pour expliquer comment, dans les deux "cas qui j'ai rapportés les ventricules du

" cœur

" cœur ont pu s'ouvrir ſans cauſe exteri-
" eure, il faut remarquer que dans le pre-
" mier, il y avoit une eroſion aux fibres
" charnues du ventricule droit, qui ſem-
" bloient avoir été ulcerées & creuſées
" peu à peu juſqu' au trou qui ouvroit le
" ventricule; et que dans le ſecond, le
" chair du cœur étoit devenu molle au
" point qu' en quelque endroit qu' on pre-
" ſentat le bout d'un ſonde, ſans l'appuyer
" elle entroit & traverſoit le cœur par
" le ſimple poids, de l'inſtrument qui n'eſt
" pas conſiderable.

" Donc la rupture de cet organe ſera
" raiſonnablement attribuée a l'amolliſſe-
" ment de ſes fibres ou a un ulcere qui en
" aura uſé l'epaiſſeur. Ou trouve pluſieurs
" examples de l'ulcere, dans le Recueil de
" Bonetus, mais un ſeul de la Moleſſe."

The enlarged bulk and weight of the ſubſtance of the heart is ſometimes ſuddenly fatal as well as its rupture: ſuch a caſe is quoted by Lanciſi, from the Chirurg. Obſerv. of P. Marchetti. The patient

tient ſeems to have laboured under the ſymptoms of the *Angina Pectoris*, as they are exactly and eloquently deſcribed by Dr. Heberden. The heart was found three times its natural ſize, and the pericardium adhered in many places to the pleura, and even to the diaphragm, ſo as to weigh it down, and occaſion a fulneſs in the hypochondria.

A corpulent gentleman, aged ſeventy, who had been for ſome time troubled with aſthma and pain in his cheſt, and died ſuddenly, being opened, oſſifications were found in the aorta and the baſis of the heart; its bulk and weight increaſed by an unuſual quantity of fat; ſuch alſo ſeemed to be the cauſe of the ſudden death of C. B—; for the heart and abdomen ſeemed covered with more fat than Mr. Cauſer, a ſkilful Surgeon, who opened the body, had ever ſeen.

Beſides theſe cauſes of *Angina Pectoris*, oſſifications of the valves of the heart, polypoſe concretions in its ventricles, extending far into the great veſſels; water, blood,

blood, and purulent matter in the pericardium, mediaſtinum, or cavity of the thorax, have produced it: and the ſame ſudden termination of life will often be brought about by cauſes acting on the living nerves, which leave no morbid appearance in the vital organs diſtinguiſhable after death by diſſection.

Aneuriſms, ruptures, and other fatal diſeaſes of the heart, are often cauſed by fear, ſudden paſſion, oppreſſive anxiety, and other vehement emotions of the mind often indulged. I recollect ſeveral perſons who had the *Angina Pectoris*, and who died ſuddenly, to have been of this kind of diſpoſition. The government of paſſion is therefore to be conſidered as neceſſary to prevent this cataſtrophe, as well as to ſecure general eaſe and health. Far be it from me to wiſh to baniſh from the breaſt its moſt engaging feelings, and to plant inſtead the unfeeling torpor which inſulates individuals, and makes them unaffected and indifferent to the intereſts, the woe, or happineſs of mankind. Such was not my

deceaſed

deceaſed friend. I only wiſh to regulate and temper this amiable warmth of ſoul, and to keep in view a fact, that the heart is an involuntary organ. Volition has no power over it, and unimpaſſioned thought does not affect it; but the frequent repetition and long indulgence in vehement and uneaſy paſſions, have often created the moſt fatal diſeaſes in this part.

This ſurvey of ſome of the cauſes of *Angina Pectoris* ſhews why it is ſo generally an incurable and mortal diſeaſe, and yet points out the expediency of attempting a cure in ſome caſes and circumſtances; and, in all caſes, the duty of attempting to put off the fatal hour, by prudent methods of prevention and palliation, by ſobriety and regularity of life and diet, guarding againſt exceſſes of every kind, which may create indigeſtion or too much diſtend the ſtomach, eſpecially at bed time; for in a decumbent poſture the preſſure of a ſtomach over-filled, as well as its uneaſy irritated ſtate, muſt create very dangerous obſtacles to the circulation of the blood,

 when

when any diſeaſe in the heart renders it already too unequal to its office; obviating fulneſs of the blood veſſels by ſeaſonable evacuations, and by keeping the ſecretions open; avoiding hurry, and exceſſive accelerated motion, by hard exerciſe; yet ſupporting the ſtrength and ſpirits by being much in the open air and on horſeback, and much too in the ſociety of cheerful and eaſy companions.

Worceſter,
Dec. 1, 1785.

ARTICLE XXXII.

Of the Scarlatina Anginoſa, as it appeared in London in the Year 1786: *By* JAMES SIMS, M. D. PRESIDENT *of the* MEDICAL SOCIETY *of* LONDON, &c.

Read January 8th and 29th, 1787.

THE *Scarlatina Anginoſa* having been epidemic in London and its vicinity during the laſt half of the year 1786, and having been attended with conſiderable mortality,

mortality, eſpecially amongſt children, a concife deſcription of it may not be unworthy the attention of the public. After having ſaid that it occaſioned great mortality, it muſt appear ſurpriſing that only nineteen deaths are put down to the account of ſore throat in the bill of mortality for the whole year; but it is to be noticed that in the ſame bill ſeven hundred and ninety-three deaths are placed under the head of meaſles, which is a greater number in proportion to the whole deaths than ever happened in one year. It is further to be remarked, that the meaſles were not perhaps in London during the whole year; at leaſt I imagine they could not be very common, ſince I did not ſee a ſingle inſtance of them, although I ſaw above two thouſand patients in that time in my private practice, and in that of the General-Diſpenſary, which differs from that of hoſpitals in ſhewing us diſorders as they occur in the houſes of individuals. The reſemblance between the ſcarlet eruption in this fever and that of the meaſles

 may

may eaſily account for the miſtake of unſcientific ſearchers, ſince perhaps even Morton himſelf confounds them in his deſcription of Spurious Meaſles, which from his account of the *Angina* attending them, ſeem to be no other than the diſeaſe of which we are now treating.

Another obſervation occurring from the bills of mortality, is that the article of fever, comprehending ſcarlet and ſpotted fever, is vaſtly increaſed above what it has been, any year for a dozen preceding ones. Under this head therefore a large number of the deaths by this diſeaſe are probably included.

To give ſome adequate idea of the virulence of this malady, I ſhall only mention that whatever houſe it found a footing in, it never left until it had viſited every young perſon, and moſt of thoſe advanced in life; ſo that many families loſt two children, ſome more, and I have reaſon to ſuppoſe, that many grown perſons fell victims to it, who were ſuppoſed to die of

common

common fevers; which circumſtance ſhall be more particularly noticed in the ſequel.

The ſummer of 1783, was the warmeſt that had been felt for a ſeries of years, and was attended by an uncommon quantity of thunder, at leaſt in the vicinity of London. Two moſt remarkable meteors likewiſe appeared, of which deſcriptions may be ſeen in the Philoſophical Tranſactions: this was ſucceeded by two of the froſtieſt winters that had been known ſince the year 1740. The ſpring, and beginning of the ſummer which ſucceeded the laſt of theſe, namely, that of 1785, was exceedingly dry, ſo as to occaſion in moſt countries a great ſcarcity of graſs: ſince that time the weather has been very wet and rainy, few fair days occurring even in the ſummer or autumn of 1786. How far this ſeries of weather operated in propagating the diſeaſe we are treating of, ſhall be the ſubject of future conſideration.

The firſt caſe that I ſaw of this diſorder

was in the month of March 1786, when there was ſnow lying on the ground. It attacked a young gentleman in the neighbourhood of Camberwell, and confined him to his bed about twelve days, after which he recovered ſlowly his former ſtate of health. The ſcarlet efflореſcence was conſiderable, and his throat was much inflamed, and threw off ſome ſloughs. Though it appeared moſt of the inflammatory nature, yet it betrayed its malignity by infecting a female relation who came to attend him; but as ſhe was carried home as ſoon as the inflammation became conſiderable, and as I met with no more caſes of it for ſeveral weeks, it made no great impreſſion on my mind.

In the month of May, I attended a young lady at a boarding-ſchool in Hampſtead, who had a ſore throat, but no ſcarlet eruption; the inflammation almoſt diſappeared and returned alternately for the ſpace of ſeveral weeks, and had ſo little of a putrid or malignant appearance, that when the moſt ſerious conſequences followed

lowed

lowed it afterwards, I did not at firſt aſcribe the effects to her.

By this ſpark, however, a violent flame was apparently kindled; for, all at once, in the month of June, ſeveral young ladies in the ſame ſchool were affected, and the infection made ſuch progreſs, that in a ſhort time above twenty were ſeized with the diſeaſe in a violent degree, beſides many more who had it lightly. At that time it prevailed in a ſmaller degree in ſome other villages about London, but did not make any conſiderable progreſs in the Capital until the month of Auguſt, from which time until the end of the year, it increaſed to a very great degree: ſo that in the General-Diſpenſary, and in private practice, I have ſeen above three hundred caſes of it.

The diſeaſe being moſt prevalent among children and young perſons, I ſhall firſt delineate its appearance in them, and principally under the mode of treatment hereafter to be deſcribed; for under a different mode

mode I have not a doubt that the appearances would have differed. This is a circumſtance too frequently miſtaken by authors, who deſcribe as univerſal, thoſe ſymptoms which only occur when a complaint is managed in their particular manner; by which means thoſe who ſee it when treated differently, are often led to deny its being the ſame, and many needleſs varieties, if not ſpecies, and even *genera* of diſeaſes are created.

The firſt ſymptom which uſually pointed out to the family the acceſs of the diſorder was a great ſickneſs of the ſtomach, with a very copious bilious vomiting; yet, though this was the firſt thing that alarmed byeſtanders, I have reaſon to ſay with almoſt certainty, that it was preceded by other ſymptoms. In many families where ſome have been confined with the diſeaſe, I have had an opportunity of obſerving the firſt, and moſt minute approach of it in others, and there always found that the firſt marks of its approach were a paleneſs and dejection of countenance; and if the fauces

were inſpected, the under edge of the *velum pendulum palati*, was conſiderably redder than natural. The pulſe at this time was rather diſturbed, and flurried than feveriſh; in ſome the uvula was more inflamed, and the tonſils a little ſwelled, ſo as to give a ſlight degree of pain in ſwallowing; this pain and inflammation, however, varied on different days, ſo as to give frequently hopes of the diſorder going entirely off; and I have reaſon to think that it often did go off under a treatment hereafter to be mentioned, without ever gaining greater ground. In very many, however, after remaining in this uncertain variable ſtate for ſeveral days, the ſickneſs and vomiting came on ſuddenly, and the diſeaſe was completely formed.

Immediately after the vomiting, or at leaſt the next morning, a conſiderable redneſs of the face appeared, the eyes likewiſe were ſomewhat inflamed, but not watery as in the meaſles; the pulſe at this time was conſiderably quicker and fuller than ordinary. On inſpecting the throat, a tumor

a tumor of the tonfils was now very evident, attended with a florid rednefs, which fpread over the whole *velum pendulum*, *uvula*, tongue, and that part of the palate adjoining the *velum*. Moft complained of a flight pain in deglutition, and a few, of a confiderable pain obvioufly from the greatnefs of the tumor, which in them was very large.

The rednefs which had fhewn itfelf in the face, foon began to fpread over the reft of the body, and particularly the arms, fo that in the fpace of twenty-four hours it was become pretty univerfal. In many it was fpread very evenly, in which cafe it was fimply of a red colour; but in others, efpecially where the fever was fomewhat higher, it appeared in large blotches, of a fcarlet, or fiery red colour, which were raifed above the fkin, or rather the place where they were, was elevated and fwelled. Thefe blotches ufually difappeared in the parts where they were firft feen, in a day or two; afterwards appearing in another, and fo on for many days; nay, I have known

known them continue thus above a fortnight, and in a very few inſtances, after all the ſymptoms were abated, and the diſorder apparently almoſt gone off, I have ſeen a freſh crop of them with a reiteration of the former complaints.

By the third day of the diſeaſe the redneſs was at its height, ſcarcely admitting of any increaſe afterwards. This was by no means the caſe with the *Angina*, for ſoon after the firſt redneſs appeared on the tongue and fauces, a prodigious ſecretion, of a tough, whitiſh mucus, from theſe parts took place, which ſpeedily overſpread them, covering them with a thick tenacious ſlough. This phlegm might be expected to raiſe a conſtant cough and endeavour to ſpit it out; but that was by no means the caſe, as very few patients ſeemed to be incommoded thereby, or have much deſire to get rid of it.

About the fourth day, whilſt the efflo-reſcence uſually continued the ſame, or was even begun to decline, the complaints about the throat were on the increaſe.

The moſt frequent appearance was a great ſwelling of the tonſils, which looked very red and inflamed, but not ulcerated, as did alſo the adjacent parts. There were however in many caſes conſiderable ulcers to be ſeen on the tonſils and *velum pendulum*, particularly where it hangs from the bones, ſpreading ſometimes along theſe bones for a little way.

I ſhould have mentioned that theſe ulcers were often to be ſeen, in a ſmall degree, on the third day; nay, I have ſeen them in two or three bad caſes on the ſecond morning; and there was I believe an appearance often preceding them from whence they might to a certainty be prognoſticated. This was a ſomewhat raiſed, circumſcribed, deep purple appearance of the parts, which did not look like ſound fleſh, but had that puffy look which we ſee in what is commonly called proud fleſh. The ulcers were covered with an aſh coloured ſlough, which ſometimes aſſumed a livid or blackiſh colour; this change I at firſt aſcribed to greater malignity, and expected a fatal

a fatal event; but not finding this conjecture verified in the event, I came to disregard this appearance.

On the fifth day, uſually, all the appearances about the mouth and throat were at the height; the ſwelling of the tonſils was now greateſt; the ulcers, if there were any, largeſt and darkeſt coloured, and the difficulty of ſwallowing moſt obſervable; their voice likewiſe was manifeſtly altered, being often ſnuffling through the noſe: this alteration I firſt aſcribed to the ſame cauſe as in a common cold, and expected it to be exactly in proportion to the ſize of the ſwellings about the tonſils. This expectation was alſo verified in many who had great ſwellings there; the alteration beginning on the ſecond or third day, increaſing as the tumors roſe, and leſſening as they declined, and went away. Yet a number of the worſt caſes ſhewed this not to be exactly the matter of fact; in them the voice being notably altered, although there either had been no apparent ſwelling there, or at leaſt what little there had been was totally gone, and the parts had aſſumed a tolerably healthy

look.

look. The quantity of phlegm and viſcid matter with which their mouths were now filled, eſpecially infants and relaxed women, was almoſt inconceivable, and they were no ſooner freed from it than it was re-produced in as great quantity as before; ſo that clearing their throats and mouths of it, was an endleſs, and apparently a needleſs trouble, as it did not accumulate by being let alone, nor did the patient ſeem to feel any inconvenience from it, as they always ſhewed a great reluctance to the having it meddled with.

This phlegm was moſtly only remarkable for its extreme tenacity; ſometimes, however, it was about the height of the diſeaſe, and afterwards, mixed with blood. I have likewiſe ſeen in bad caſes, lumps as large as walnuts ſpit up, or rather dragged out of the mouth, of a firm conſiſtence, and reddiſh, looking exactly like the coagulable lymph of the blood mixed with ſome of the red particles. Theſe lumps ſeemed to come both from the *trachea* and *œſophagus*, as in all the caſes where I ſaw them, there

there was both a difficulty of breathing and alſo of ſwallowing, which latter in ſome went ſo far as totally to hinder them from taking any ſolid food, the pain and ſtraitening of the paſſage being lower than the *pharynx*.

I ſhall now mention ſome other ſymptoms which accompanied it from the firſt. As inſpecting the fauces, to ſee the various changes from day to day, led me often to depreſs the tongue, I could not but obſerve, that all from the very beginning complained of that depreſſion giving them great pain, much more indeed than I had ever obſerved in common quinſies, though attended with vaſtly greater ſwelling and inflammation. Children marked their reluctance in the moſt ſtriking manner by their cries and ſtruggles; indeed all, even to the eldeſt, ſhewed great averſion to the having their mouths or fauces at all meddled with. This pain and reluctance continued ſeveral days after the diſorder had been at the height, as did alſo the inability to take

ſolid food, mentioned in a former paragraph.

As ſoon as the phlegm appeared very copiouſly in the fauces, a diſcharge of matter took place from the noſe in many; this reſembled in colour what came from the mouth, but was much thinner and leſs tenacious. The noſe in theſe was evidently ſore, and they complained of great pain in having it even gently wiped; the under part of it and the upper lip were often ſwelled, red, and excoriated by this diſcharge, which continued moſtly ſeveral days after the diſorder began to decline.

It may appear to many, that this is a very imperfect account of ſo conſiderable an epidemic, which raged ſo univerſally; but this opinion will ceaſe on reading the following liſt of ſymptoms which did not appear. And firſt, there was no great degree of fever attendant upon the diſorder; the pulſe was at the firſt ſtrong, but as the diſorder advanced it loſt in ſtrength what it gained in quickneſs, and at the height

height was indeed very quick, but neither remarkable for its ſtrength nor weakneſs; and that being over, it fell quickly, often in twenty-four hours, to its natural ſtandard. The heat of the ſkin was moſtly not conſiderable; it was greateſt when the efflореſcence was at the height, and declined with that; or if it failed to do ſo, the diſorder never went off in a kindly manner. There was ſcarcely ever any degree of thirſt, ſo that many, eſpecially children, could not be prevailed on to drink enough to keep their throats in ſeemingly proper plight for deglutition; or even thoſe more advanced never took drink except when put in mind of it. Another remarkable circumſtance as to their drink was, that when aſked what they choſe, they almoſt univerſally, even to the children who liſped their words, mentioned wine or porter. They had moſtly no appetite, yet on being preſſed to it could get down any liquid food without great diſreliſh; and ſome ſhewed a deſire for ſtrong and reliſhing diſhes; they were almoſt never either coſtive or purged; their breathing, except in a few bad caſes, was never difficult

cult or laborious; their breath was never fœtid, or particularly offenſive; they all ſlept well, in general much more than natural, not excepting thoſe who died of it: it muſt be remarked, however, that this catalogue of favourable ſymptoms is only to be referred to thoſe caſes that were treated in the mode hereafter to be mentioned, as it was evident enough that thoſe who were treated differently had abundance of malignant ſymptoms.

On the ſixth day uſually, in ſome a little later, the diſorder began to decline; the effloreſcence had by this time in moſt perſons completely diſappeared; the ſwellings of the tonſils gradually began to ſubſide; the phlegm was becoming leſs tenacious, and ſeparated with eaſe from the fauces, as did the ſloughs from the ulcers, leaving them, in part raw, but of a clear healthy red, which in a day or two was the ſituation of all within the mouth; the pulſe quickly came to its natural ſtandard. About this time many had ſome laxative motions, paſſing a ſimilar mucous matter to that diſcharged from the

the mouth and noſe; theſe, however, did not weaken the patient, and after a gentle doſe of rhubarb they entirely ceaſed. The appetite returned, but not to that degree of voraciouſneſs that I have often ſeen after feveriſh complaints; ſo that by the eighth or ninth day health ſeemed to be reſtored, except that a conſiderable degree of weakneſs remained for a time in thoſe advanced in life who had been ſeverely afflicted with the diſorder. As ſoon as the amendment was very evident, the inclination for porter and wine entirely ceaſed, and many children who had before drank it greedily, could not be brought to taſte a drop.

This was the courſe run by the diſorder in the ſummer: as the harveſt however advanced, there was ſome variation obſervable in it; a frequent ſhort hicking cough took place in many; they did not bring up any matter with it, nor did each fit laſt beyond one or two ſhort expectorations, but theſe were repeated ſeveral times in a minute; many who had no appearance of pituita, and but the ſlighteſt poſſible

appearance of *Angina*, had this cough more troubleſome than thoſe who had much of either. Another circumſtance at this time of the year, I mean in November and December, was, that a few days after the apparent change of the diſorder, a ſwelling attacked the face, but more frequently the extremities, attended with moſt excruciating pain. This ſwelling was neither red, puffy, nor œdematous, and did not depend upon the previous mode of treatment, as it occurred in thoſe who had been treated in the moſt different manners. Some firſt complained of a violent tooth-ach; after two or three days they often complained of an equally violent pain in the back, the firſt one gradually ſubſiding. In a day or two more, or even ſooner, the pain attacked their elbows, wriſts, and hands, which were uſually the laſt parts attacked; theſe pains in ſome patients were only in the hands and arms. The laſt difference I ſhall mention in this diſeaſe, was a ſwelling of the parotid glands; I mention this here, becauſe the firſt caſe where I ſaw this ſwelling

in any degree, occurred after the middle of September. This ſwelling was ſometimes apparent in the beginning of the complaint, at other times it came on about the fifth day with great pain, protracting the diſeaſe; and in many it came after the effloreſcence had entirely diſappeared, bringing it in ſome degree, and all the feveriſh ſymptoms, back with it. Though this ſwelling was attended with great pain, I did not ſee one caſe of its ſuppurating, any more than I did of the tonſils inwardly undergoing the ſame proceſs, although I have heard this mentioned by ſome practitioners; but I am inclinable to think, we only differed about the meaning of the term, for I have ſeen caſes where the tonſils, after being greatly ſwelled, have pretty rapidly ſubſided, whilſt the perſons have ſpit up diſagreeable phlegm more copiouſly and freely; and if they mean this by ſuppuration, there is no difference between us. I would not, however, call this a ſuppuration, becauſe what was ſpit up had no appearance of *pus*, as in *Anginas* that I have ſeen really ſuppurate; nor could the formation of

matter

matter be at all ſeen in the part, as I have perceived in other quinſies; I therefore think this was only a reſolution of the inflammation, wherein the parts being relaxed, a more copious ſecretion, and freer excretion took place.

I ſhould mention here, that, both in the caſes attended with the pains already mentioned, and thoſe with the parotids, the pulſe was more violent and inflammatory than in any other caſes I have ſeen.

There was one ſymptom which I ſaw in ſeveral caſes follow the criſis of this diſeaſe, and which deſerves to be particularly noticed. This was a moſt inconceiveable degree of languor, which attacked the patient in an inſtant when all diſorder ſeemed almoſt gone; it was without pain or uneaſineſs, nay, I may ſay, without dejection of ſpirits, for, although I have known ſome take a ſolemn leave of their families, yet it was with the utmoſt tranquillity, and, on being aſſured by me on my arrival that it was unattended with danger,

danger, they have continued for ſeveral hours whilſt it laſted, converſing with thoſe about them in the moſt placid cheerful manner. A Watch-Maker gave me the beſt deſcription of this, by telling me that he felt as if all his inward works were going inſtantly to ſtop, his main-ſpring of life being entirely run down. I am inclinable to think, that this feeling is connected with the *Angina*, from having myſelf ſuffered it after one of the attacks of that diſorder, which for many years I was ſubject to. As there were no other ſymptoms but the mere languor, I found proper encouragement given to the patients themſelves, and ſome gentle cordials preſcribed, in order to ſatisfy them and the bye-ſtanders, who were always more alarmed than the ſufferer, together with a little *time*, a medicine that cures oftener than we are willing to acknowledge, always got the better of it.

As I have gone through the manner in which it terminated favourably, I ſhall now proceed to the way in which it ended fatally.

On

On the fourth or fifth day, in ſome even ſooner, a great deſipientia began to appear; this never roſe to delirium, but appeared like fatuity, their eyes having a ſilly vacant ſtare, and their words ſcarcely having any meaning. I mention this ſymptom firſt, as being the moſt ſtriking and conſtant one, and very different from that wandering on awaking from ſleep, or rather when in a ſtate between ſleeping and waking, which many had in the more favourable ſpecies of the diſeaſe, and which often accompanies other fevers; their pulſe became at the ſame time very quick, unequal, and weak, and in many was not to be perceived; their extremities loſt their feveriſh heat, though far from cold; and their whole ſkin, inſtead of the ſcarlet, aſſumed a very remarkable appearance, which reſembled nothing ſo much as that of a dead body which has been kept ſeveral days, or as if a mixture of blood and water were univerſally diffuſed under it and could be ſeen through it; the ſkin at the ſame time felt entirely flaccid, but without any perſpiration, and though not ſo cold, yet like that of

of a corpſe; they had little purging, but whatever they paſſed in that way was moſtly without their knowledge, as was their urinary diſcharge; they ſeemed to have ſome difficulty in ſwallowing, at leaſt they were exceedingly averſe to make any attempt for that purpoſe; their breath, though far from laborious in general, yet was ſometimes for a few minutes very unequal and ſeemingly difficult; but I have ſeen this inequality, though not to ſo high a degree, in ſome that recovered: a few of theſe had their throats loaded with an enormous quantity of viſcid phlegm, which raiſed a rattling kind of cough, without any attempt to ſpit it up; but far the greater number had loſt moſt of the morbid appearances in their throat; ſo that from an inſpection of that alone, a perſon would have been inclined to pronounce them out of danger. This ſtage laſted but a ſhort time, the patients moſtly dying in twenty-four or thirty-ſix hours after it began. Though I was called to many in it, (the friends never having been alarmed until the extreme weakneſs and faintneſs attending

ing it rouſed them from their ſecurity,) and tried a variety of the moſt powerful medicines, particularly cordials, bliſters, and even James's powder and antimonials; I did not find any of the ſmalleſt ſervice, and ſaw only one perſon who recovered from it: this was a woman, in whom the change appeared very late, ſo that it was the fourteenth day of the diſeaſe when I firſt ſaw her. In her the pulſe was not to be felt, and ſhe was totally inſenſible, although ſhe had been drinking two bottles of white wine a day for ſeveral days. As I thought the caſe almoſt deſperate, on conſidering all the ſymptoms, which were thoſe of the laſt ſtage before deſcribed, I reſolved to try what leaving off wine and ſubſtituting porter in its ſtead might do, finding that to be the liquor ſhe was moſt accuſtomed to; though ſcarcely able to articulate any words, ſhe teſtified as well as ſhe could great pleaſure in the change, and drank greedily three or four quarts a day. From this moment ſhe began to amend, yet ſhe was reduced ſo low that, although it is ſeveral months ſince, ſhe has not yet recovered any tolerable ſhare of ſtrength or health.

health. The way in which this diſeaſe terminated fatally, at a later period, I ſhall take notice of hereafter.

I have hitherto mentioned the ſore throat and ſcarlet eruption as always occurring together in this diſeaſe, but the fact is, ſeveral patients had the *Angina* without any apparent eruption, whilſt on the other hand, others had the eruption without any ſoreneſs of the throat; the former happened almoſt entirely to thoſe beyond the age of puberty, whilſt the latter was as much confined to the more youthful. In one child the ſcarlet fever appeared without any *Angina*, and having finiſhed its courſe, left the patient ſeemingly in perfect health; but in a few days a fever returned without any eruption, but with a very conſiderable degree of ſore throat, and much pain and ſwelling of the tonſils and parotids, which likewiſe ran its courſe as if the former ſymptoms had never appeared. Theſe anomalous caſes happened more frequently towards the cloſe of the year, when the varieties before mentioned likewiſe took place.

Whilſt

Whilſt this diſorder reigned among the young, and attacked ſome of the middle-aged, a fever, ſimilar in many reſpects, was common among perſons more advanced in life, which likewiſe attacked ſome of the middle-aged who had been debilitated by previous diſeaſe, long courſes of weakening medicines, or finally, and more eſpecially, by long anxiety and vexation of mind, which laſt is in this town a moſt frequent, though unſuſpected cauſe of fatal fevers ; ſo much ſo, that I am convinced that many hundreds annually are carried off here by rapid fevers cauſed by diſappointment alone, and have likewiſe obſerved that a reputed putrid fever is the moſt general exit of all thoſe who are unſucceſsful in life, I mean in this town, for in the country the caſe is very different. This fever was exceedingly mortal, ſeveral medical men, as I have reaſon to believe, falling ſacrifices to it. About the manner of its ſeizure I can ſay nothing from my own knowledge, having not ſeen one perſon early in it. It was uſually about the ſeventh or eighth day of the diſeaſe when

I firſt

I firſt ſaw them, at which time they were in a ſtate exactly reſembling what I have deſcribed as the cloſe of the ſcarlet fever. They were deſipient, inſenſible, with a pulſe ſcarcely to be felt, and not to be counted, and all had petechiæ; the ſkin of their extremities had likewiſe that corpſe-like appearance already mentioned. On inquiry, I found that their malady had given no alarm to their friends until that moment, being uſually aſcribed to lowneſs of ſpirits, and many of them had not been entirely confined to their bed until within a day or two; none of them had any ſcarlet efflореſcence, and on aſking whether they had any ſore throat, it was uniformly denied; yet, on a more minute inveſtigation, I found that they all had complained of a very ſlight one, which, as perhaps they never mentioned it but once, made no impreſſion on the bye-ſtanders, nor would it ever have been thought of afterwards but for the extreme exactneſs of my inquiries. On inſpecting their fauces, I found their teeth ſurrounded with a dark furring, no mucus in their throat, their tongue

dryiſh,

dryiſh, but not remarkably foul, and in all a ſlightly inflamed line along the under part of the *velum pendulum* and *uvula*, exactly like what I have already deſcribed in ſome caſes of the former fever. Theſe patients in a day or two all ſunk to reſt, as I may call it, dying without a ſtruggle, or almoſt a groan, the ſtrongeſt cordials not ſeeming to produce the ſmalleſt effect, and bliſters in many not even raiſing the ſkin in the ſmalleſt degree. Whether this fever was the ſame as that before deſcribed, varied only by the age and circumſtances of the patient, or was ſimilar to thoſe deſcribed by Sydenham, occurring at the ſame time with a particular epidemic diſorder, as the *febris varioloſa*, which prevailed at the time the ſmall-pox were epidemic, I cannot abſolutely determine: from ſeeing, in two inſtances, the *Anginous* fever, apparently raiſed in a family by an elderly perſon who had this laſt deſcribed fever; and alſo in a few inſtances from meeting with the latter, where the young part of the family had gone through the former ſpecies of fever, I ſhould be

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led to ſuppoſe them only varieties of the ſame diſeaſe; but on the other hand, theſe coincidences were ſo rare as to leave the matter ſtill in doubt. Without attempting to propoſe any conjectures on this head, I ſhall proceed to deſcribe the method of cure of the firſt ſpecies of fever already deſcribed, and which I call the *Scarlatina Anginoſa*, premiſing, that but two perſons died out of above two hundred in whom it was uſed; both of which caſes ſhall be mentioned hereafter.

I had been myſelf, every winter for many years, liable to one or more attacks of the inflammatory *Angina*, for which I had uſed many methods of cure in vain, the diſorder running its regular courſe in ſpite of all my efforts; and to ſhew that theſe were not feeble ones, I ſhall only mention that I once had about forty ounces of blood taken from my arm in the ſpace of eight hours, without its ſeeming in the leaſt to ſhorten the complaint. At laſt, about ten years ago, I reſolved to try what the vitriolic acid would do in the caſe; I therefore, on the next attack, ſent

for two ounces of the oil of vitriol, and mixing part of it with water, I made as ſtrong a gargle as my throat would poſſibly bear; I continued five hours inceſſantly gargling with this, until I had uſed many quarts of water, and alſo the greateſt part of the acid: that I might give the gargle the greater efficacy, I, from time to time, ſwallowed as much of it as I found my ſtomach would receive. The deſign I had of ſwallowing part of it was my reaſon for chooſing this acid, as I knew the ſtomach would bear a much greater quantity of it than any other aſtringent we are acquainted with, and believe we cannot apply a gargle ſufficiently to the diſeaſed part without letting ſome of it paſs into the *œſophagus.* So intent was I in the proſecution of my ſcheme, that I believe I would have perſiſted until I had uſed the whole of the acid, had I not been conſtrained to leave off by exceſſive faintneſs and fatigue; when I had done, the inflammation had entirely ſubſided, and my throat felt quite parched and ſhrivelled; from that time I have not been once attacked by the diſeaſe.

My

My ſucceſs in this caſe led me to preſcribe the ſame acid in all other caſes of *Angina* where I was conſulted, nor have I had as yet reaſon to repent its exhibition. In this courſe of practice, however, I ſoon came to rely more upon its inward exhibition than upon its uſe as a gargle; in the preſent epidemic therefore, I naturally had recourſe to a remedy ſo often tried and found ſucceſsful; my common preſcription was two ounces of tincture of roſes, a drachm of ſyrup of lemons, and ſpirit of vitriol twenty drops, or as much as could be added to the tincture without making it too highly acid for the particular patient it was preſcribed for. This draught was ordered to be taken by an adult every hour and half, or every hour, and even oftener, according to the exigence of the caſe; and even children from two to three years old have ſwallowed much above two hundred drops of the acid in twenty-four hours.

As I had always ſeen the greateſt advantage in putrid or malignant diſeaſes from

the uſe of gentle laxatives, and have ever found rhubarb moſt conſonant to the bowels of a Londoner, I began in the very firſt inſtance with ordering it: my common preſcription conſiſted of equal parts of rhubarb and ſal polychreſt, of which mixture as much was taken as procured about two motions a day. Having already ſaid that the patients in this diſeaſe were not at all inclinable to coſtiveneſs, the exhibition of laxatives may ſeem to ſome unneceſſary; but I muſt remark, that in moſt putrid fevers the caſe is the ſame, yet their uſe ſeems ever attended with ſingular advantage, and beſides, there was frequently a nauſea and conſiderable vomiting attending the beginning of the diſeaſe we are now treating of. I ſhould perhaps have mentioned firſt, that wherever this nauſea took place, I always ordered a gentle emetic of ipecacuanha wine to be taken inſtantly, which ever gave conſiderable relief; this remedy, however, was ſcarcely ever given but in that particular circumſtance, and cannot therefore be enumerated among thoſe commonly uſed, as it was but a few caſes to which

which I was called in time to prefcribe it.

Upon the above recited draughts and powders I foon found reafon to have fuch complete reliance, that in many cafes I never once varied them, and even where I did make an alteration in them, it was fuch as contained their moft efficacious parts. Thus, as the difeafe proceeded, I fometimes ordered a ftrong decoction of the bark to be fubftituted for the tincture of rofes, and to this, if the pulfe were very weak, I added fome cordial confection and ftomachic tincture, ftill however retaining as much of the fpirit of vitriol as I thought convenient, and perfifting in the ufe of the eccoprotic powder.

During this whole courfe, I ordered the patient to eat moderately of any food that the ftomach feemed to relifh, not excepting broth or flefh, and to drink a little wine mixed with water if they felt at all low, or porter or ale if they feemed more agreeable to their palate, which was often the cafe. I have faid a *little* wine, becaufe a

large proportion of the ſufferers being very young, did not ſeem to require any; and I have frequently obſerved in putrid caſes a large quantity of wine do great miſchief, where half a pint would have been highly ſerviceable. In all theſe caſes we ſhould ever keep in mind that our intention in ordering it ſhould be to raiſe the ſtrength, and that nothing debilitates ſo much as too large a quantity of it. which is extremely viſible in a perſon who is intoxicated.

Having proceeded in this manner during the riſe and height of the diſeaſe, I found it neceſſary to change my plan as ſoon as the height was paſſed. This was a point of the treatment as needful to be known and exactly attended to as any other in the malady; for as ſoon as the pulſe about the ſixth day began to fall to the natural ſtandard, if the cordial medicines and regimen were perſiſted in, or increaſed with a view to keep up the ſinking pulſe, many vexatious or even dangerous conſequences enſued; a new fever, often more violent than

the firſt, was raiſed, a great ſwelling and inflammation of the tonſils or parotids with acute pain came on, and the ſcarlet eruption re-appeared as copiouſly as before.

In adapting ourſelves to this change ſeemed one of the niceties in the treatment of the diſorder; but as the change of appearances have been already pointed out, I ſhall not recapitulate it; ſuffice it to ſay, that as ſoon as the change began, I always ſubtracted ſomewhat from the wine and cordials, and quickly prohibited them entirely, diminiſhing at the ſame time the ſpirit of vitriol, which ſeemed now unneceſſary, and giving the rhubarb in ſmaller quantity, and relying during the period of amendment upon gentle nouriſhing diet and broths, as the only medicines, except where ſome particular ſymptom ſeemed to require attention.

I have as yet ſaid nothing of gargles, liniments, and bliſters; the truth is, I place very little confidence in them, not but that I have tried them repeatedly. At

firſt I always ordered a gargle to be uſed of tincture of roſes with ſome ſpirit of vitriol, or acid of ſea-ſalt. I afterwards tried a ſolution of alum, vinegar, and other aſtringents; I have likewiſe ordered milder ones, as ſage, or balm-tea, or barley-water, but cannot ſay that I have found much benefit from any of them; on the contrary, when there were many ulcers and ſloughs in the throat, I think I have ſeen them of diſſervice if much uſed. The only gargle that I think I have ſeen any ſervice from, is brandy with a little water, or frequently without any mixture whatever; but even this could be uſed in general only ſeldom: a very frequent uſe of it, or any waſh, or indeed any conſtant exerciſe of the parts, as in expuition, ſeeming to be prejudicial. Waſhes thrown into the throat by a ſyringe ſeemed to have no better effect. As to the fumes of hot liquids drawn in with the breath, I can ſay little, having only in two caſes ordered the vapour of vinegar and water to be uſed, but with no apparent benefit; though I have preſcribed it with great advantage in other caſes of quinſy affecting the breathing.

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I have uſed ſeveral outward applications to the throat, and can ſay but little in their favour. Volatile liniments and bliſters I have ordered very often to the part, without perceiving any other amendment than happened from the change of the diſorder if it was about that period, and ſuſpect the praiſes I have heard of them have been owing to their being ſo timed as nearly to hit that period; I have beſides moſtly found the neck a very inconvenient, and in ladies a totally improper, place for a bliſter; ſo that when on account of a greater degree of delirium attended with much fever and ſwelling about the fauces, I have been induced to order a bliſter, I at the laſt preferred applying one between the ſhoulders, and in theſe circumſtances have often perceived notable advantage from it. When there has been a great ſwelling of the parotids externally with conſiderable pain, a poultice of bread, milk, and oil, applied to them, has given conſiderable relief; but in other caſes I never preſcribed nor ſaw it applied: of

cupping

cupping I can ſay nothing, having never uſed it.

Of bleeding, much need not be ſaid. That many caſes would have borne it I have not a doubt, from the whole complexion of the fever attending on them, and therefore I know that it was many times preſcribed without doing miſchief; but it does not follow from thence that it was requiſite, or did good. In my own practice, I began early almoſt totally to neglect it, from an obſervation that the caſes where the pulſe was ſtrongeſt, and heat and fever higheſt, were not thoſe attended with the moſt danger, and never afterwards had recourſe to it but in violent peripneumonic ſymptoms, which indeed were very rarely blended with the diſeaſe; I am alſo certain that I have ſeen many caſes become fatal entirely from an abuſe of bleeding, ſo that it was much ſafer to prohibit it univerſally, than to be at all free in preſcribing it; this remark, however, is only intended to fetter the young and unſkilful practitioner. A ſecond bleeding I believe

always

always did miſchief: the ſame remark will hold good as to ſcarification and the application of leeches. My averſion to bleeding in general firſt took its origin from finding that the application of only two leeches, which I myſelf had ordered, brought a patient into great danger, who, I had no reaſon otherwiſe to ſuppoſe would have been ſo: taught, therefore, by my own miſtake, I was afterwards cautious in ordering any thing of the kind (I would ſay to an extreme) had I in one inſtance found reaſon to alter my ſentiments.

Strong purgatives ſeemed at leaſt as objectionable as bleeding; and whenever the gentle laxatives already recommended had a conſiderable effect, I found it neceſſary immediately to put a ſtop to it by opiates, as whatever exhauſted the patient was carefully to be avoided, and Londoners, though requiring eccoprotics as much as any people whatever, bear ſtrong purgatives beyond all compariſon the worſt. The ſame may be ſaid of ſudorifics, for though a gentle perſpiration did good, and uſually

ufually attended the turn of the difeafe, yet great fweats were almoft ever pernicious.

With refpect to expofure to air, I found this diforder, when the efflorefcence was confiderable, to agree perfectly with the meafles, it being abfolutely requifite to confine the patient to his bed, and to keep the room moderately warm with fire; in this cafe the drink was allowed to be a little warmed, which I found was moft pleafing to the patient's palate; but where the efflorefcence was lefs, thefe precautions were unneceffary, nor were they defired by the patient. It is to be underftood from hence, that the expofure to cool air did not feem at all to depend on the ftate of the *Angina*; for where there was little of the fcarlet eruption and the patients were low, I have found them evidently relieved by being taken out of bed, and having the air of the room cooled.

A ftrict attention to the paffions and affections

affections of the mind was exceedingly requisite in all, but particularly in those beyond the age of puberty. With them I constantly began by giving the most solemn assurances of safety, relating how many instances of the disease I had seen, and that the method they should prosecute had never once failed of success. And here let me mention, that the chit-chat at a patient's bedside is too often neglected and contemned by young practitioners, who think it beneath a man of science; yet I will venture to affirm, that it is often of as much importance as all the medicines that can be administered, and that there is no old steady practitioner who has not saved many patients by it. The friendly attention of the physician is frequently most shewn in these apparently trifling things, which add inconceiveably to the comfort of the patients and those about them. As I am exceedingly and anxiously earnest in inculcating these minute attentions, let me add a reason, that to a liberal mind will have no weight, which is that they will ever increase a physician's

practice

practice and emolument; they will salve over every instance of bad success, and even his grossest blunders, should he be so unfortunate as to make any; whilst the contrary conduct leaves him open to every arrow of malevolence, every misrepresentation of envy; his good success will be ascribed to chance, or the trifling nature of the disease by even the patient himself, whilst even those fatal cases that were out of the reach of medicine before he saw them, will be universally ascribed to his inattention or unskilfulness. Let me add to all, that to this perhaps alone we are to ascribe the influence which apothecaries have where they attend, being the confidential friends of the family; and even to it has been owing the sole celebrity of many physicians, who have arrived at the summit of their profession, with abilities and science that would have scarcely entitled them to the meanest place in it: the liberal physician should therefore practice it, because thereby he may do good to others; the illiberal and selfish will naturally

rally adhere to it, becauſe it ſerves himſelf.

Beſides what I have mentioned as to aſſuring the patient's mind, if they were of ſuch an age as to be operated on by fears, the minds of the attendants and all who came nigh them were to be rendered eaſy, as patients often ſuſpect what is ſaid to themſelves, and with ſcrutinizing looks and queſtions endeavour to ſift out the phyſician's real opinion from others; the guarding therefore againſt this, without injury to his character for ability and preſcience, requires conſiderable addreſs. As the objects around us operate more upon our imaginations during illneſs than in health, when we have ſo many avocations to employ them, great care was taken that nothing but thoſe perſons and things were brought in view that were perfectly agreeable to the patient. As to this matter, I am ſorry to ſay the moderns fall vaſtly behind the ancient phyſicians, who ſtudied and gave directions for every, the moſt minute, circumſtance of this kind. I will

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only particularize one apparently trifling circumſtance. The figures, either painted or ſtamped, ſo univerſally in our bed-curtains, have, I am convinced, coſt thouſands of patients their lives: no ſooner is a perſon's head affected in a fever, than theſe begin to confuſe his mind, and in a ſhort time numberleſs wild fancies are raiſed by them, until complete delirium is excited; or, if it exiſted independent of them, it is raiſed thereby to abſolute fury. Some phyſicians ſee little of this delirium, their common viſits being ſo ſhort as ſcarcely to allow the patient, before they leave him, to fall back into his uſual wanderings after he is rouſed from them to ſenſe or reflection by the preſence of a ſtranger, and his attention being drawn to a point by the being aſked a number of queſtions. The bed clothes and curtains therefore of patients in fevers ſhould be abſolutely free from all images or impreſſions whatever, as ſhould the conſtant furniture of the room in which they lie; this, however, is not meant to preclude ſhewing them agreeable pictures,

or

or ſuch objects at intervals as will be agreeable to them.

After giving this account of the method purſued moſt ſucceſsfully in this diſeaſe, I ſhall now mention the only inſtances in which I knew it to fail. The firſt caſe was of a young lady, above ſixteen years of age, who was ſo obſtinate, that from the very firſt ſhe would ſcarcely ever obey any one direction that was given to her; nay, ſhe carried this ſo far as to boaſt to her ſchool-fellows that ſhe would not; ſhe had addreſs and cunning enough to ſecrete moſt of her medicines, and to perſuade her attendants that ſhe had taken them; and, on the fifth day, fell a victim to her own miſtaken opinion rather than the inſufficiency of the method. The other caſe however was very different, and I ſhall mention it more particularly, becauſe in it I committed two deviations from my own plan, of both of which I had much reaſon to repent. A candid acknowledgement of errors will not increaſe a perſon's preſent reputation, but a phyſician ſhould only ſtudy the good of his

his profeſſion, which I am convinced would be more ſerved by every practitioner's relating his faults, than by all the ſucceſsful caſes that are daily puffed off to the world.

In the beginning of October I was requeſted to viſit a family afflicted with this diſorder, who lived in a cloſe, damp ſituation. Beſides others, who had it in a milder manner, the eldeſt daughter was in the laſt ſtage of it, and died the next morning. The ſecond daughter, a child about two years old, had taken the diſeaſe two days before, but did not appear to me in a very alarming way; her throat it is true was ulcerated conſiderably, and her tonſils much ſwelled; the efflореſcence was at the height, and her pulſe was full and ſtrong, though quick. I put her upon the plan already laid down, and have the utmoſt reaſon to think every direction I gave was implicitly obeyed. On the fourth day the ſcarlet colour of the ſkin began to diſappear, and on the fifth, ſixth, and ſeventh, ſeveral of the uſual ſymptoms of amendment began to appear; the mouth

looked leſs foul, but the ſwelling of the tonſils did not ſubſide ſufficiently, and the pulſe did not come down near its natural ſtandard, which I attribute in part to my not being ſufficiently preciſe in ordering the quantity of wine to be diminiſhed. About the eighth day ſhe ſeemed to have an appetite, although ſhe could not ſwallow any thing ſolid, and even liquids were got down with the utmoſt difficulty, often returning both by the mouth and noſe. As her throat was greatly filled with phlegm, which ſeemed to prevent her ſwallowing, I ordered a gentle emetic to be given, which operated moderately: this was the ſecond deviation I had made from my original plan, and of which I repented much afterwards, as the child received no apparent benefit from it, and ſoon afterwards began to appear worſe. About the tenth day I was alarmed by ſeeing that fatuity appear which has been already mentioned, and which I had always found ſo fatal a ſymptom; at the ſame time, the throat ſwelled much externally around the forepart; the pulſe, which had continued quick

and weak, became now exceeding full and ſtrong, with an equal degree of celerity; great blotches of a purple colour, approaching to livid, appeared in various parts of the body, and univerſal ſlight convulſions took place.

As ſoon as this change began to appear, bliſters were tried; but in ſpite of them, and every method I could deviſe, the child grew gradually worſe; the pulſe ſunk totally, whilſt, at the ſame time, the convulſions grew ſtronger; the deglutition never became more free; ulcers returned in the fauces; the teeth became furred; tongue foul; breath offenſive, and often laborious, until, at laſt, on the eighteenth day, its ſwallowing and breathing both becoming totally obſtructed, the unhappy ſufferer died in convulſions.

It is to be remarked, that towards the cloſe of this diſorder, large quantities of a matter reſembling the coagulable lymph of the blood, was brought up both from the *trachæa* and *œſophagus*. I have known the

the

ſame to happen in ſeveral other bad caſes; and in one that was opened after death the *aſpera arteria* was found lined with this matter, like what is ſaid of the croup. From this, and the diſappearance of the ulcers in the fauces, and other ſymptoms already mentioned, in many fatal caſes, I am led to ſuppoſe, that the viſible diſeaſe in the throat was by much the leaſt part of it, and that in bad caſes it ſpread down to the lungs and ſtomach, and even perhaps through the alimentary canal.

From this caſe I was more firmly perſuaded of a maxim which my whole former practice had ſerved to inculcate, that it is exceedingly dangerous in an epidemic to deviate in any meaſure from a practice which has been found ſucceſsful. A phyſician, it is true, ſhould be attentive to every, the moſt minute circumſtance; but this attention ſhould be of the ſpeculative, not of the active kind, until ſome inſtance of bad ſucceſs ſhews that his former mode requires a change; in which caſe the attention he has beſtowed will furniſh him

with that change without the hazard of repeated trials.

Having written this diſſertation in the few hours of leiſure that were left by an extenſive practice on the diſorder which is the ſubject of it, I hope I may be excuſed the irregularities that are apparent in its compoſition; among theſe are the following miſcellaneous remarks that would have been more properly inſerted in other places.

The diſorder was moſt prevalent among the middle ranks of life. Few, comparatively ſpeaking, of the poor being liable to it, and, at leaſt, equally few of the great. It likewiſe hitherto has been pretty much confined to the City, ſo called, and Eaſtern parts of the metropolis; Weſtminſter, and the new buildings in that quarter, feeling little of its fury; confined narrow courts were more liable to it than large open ſtreets, as were alſo low damp ſituations.

Vaſtly more of the female ſex than of the

the male were ſeized with it, and it ſeemed particularly fatal to girls, from two to eight years of age. I ſaw but one child at the breaſt who had it, and that but lightly.

This diſorder ſeemed to agree with the meaſles, in being infectious before the ſickneſs ſhewed itſelf; ſo that the ſending away of thoſe children who had not been ſeized with it, as ſoon as any began to complain, did not ſerve in many inſtances to prevent their having it. The period that intervened between the time of infection and the appearance of the diſeaſe could not be determined. I have ſeen it indiſputably take place the fourth day, but, in other inſtances, it was ſeveral days later. The infection ſeemed to remain in a houſe after all the family were recovered for ſome, but not many, weeks.

The diſeaſe was totally at a ſtand during ſome days ſharp froſt that happened, but recovered new vigour ſoon after that was over. I never ſaw any danger attend it,

except where there were ulcers of the throat. A purging was always dangerous, and a ſwelling about the larynx after the turn, was particularly ſo. I ſaw but four caſes of *anaſarca* ſucceed it, and theſe were all in poor perſons, and unattended with danger.

The beſt preventative of the diſeaſe I found to be rhubarb, taken in the quantity of a few grains every morning, ſo as to procure one laxative motion in the day. I did not ſee one who uſed this, confined afterwards to bed, though ſeveral perſons obviouſly began it after they were infected, but before the time of their ſickening. Peruvian bark I found uſeful in the latter ſtages of the diſeaſe, but cannot ſay I had the ſmalleſt reaſon for ſuppoſing it ſo in the beginning, although I have often preſcribed it, and ſeen it tried by the recommendation of others.

I have avoided laying down general rules in what I have written; perhaps all epidemics ſhould ſtand, in ſome meaſure, on their

their own ground, at leaſt until we are convinced that we are acquainted with the whole circle, and I am ſure this differed in many reſpects from any of which we have a diſtinct account. I have no where endeavoured to magnify, diminiſh, or ſuppreſs, any one circumſtance for the ſake of making it agree with preconceived opinion; my deſcription, therefore, will not appear ſo exact, regular, and uniform, as it might have been made: moſt probably Nature is uniform in all her movements; but it will, I fear, be many thouſand years before we ſhall be ſufficiently maſter of her operations to point out that uniformity. My aim has been, therefore, to relate facts, and to render ſuch moſt conſpicuous as ſeemed of the moſt importance in the whole appearance of the complaint.

On firſt turning my thoughts to write on this ſubject, I believed it would be uſeful to make myſelf maſter of whatever had been written hiſtorically upon a diſorder which is generally ſuppoſed not to have exiſted above two hundred years, as, I think,

think, a proper deference to the public ſhould make every man endeavour to be well inſtructed himſelf before he attempts to inſtruct others: a man without reading, who preſumes to write, is like the blind leading the blind. In this reſearch I ſoon found it neceſſary to enlarge my view to all the epidemic diſorders which have prevailed during that period, that among ſo many imperfect deſcriptions I might collect whatever could poſſibly have any relation to the ſubject before me. Having thus finiſhed a ſketch of theſe for my own information, together with an account of the weather for that period, ſeveral important concluſions ſeemed deducible from it; but as theſe are different from many commonly received opinions, and as I think the number and accuracy of the authorities I could examine, and indeed the length of the period that can at preſent poſſibly be examined in this view, not ſufficient to eſtabliſh ſyſtematic deductions, I ſhall only throw out what has occurred to me as ſurmiſes; which indeed have ariſen entirely from what I read, as formerly I was of a different opinion,

nion, and ſo alſo are moſt of the writers I have peruſed; but in reading an author critically, and attending to, thoſe facts which often force their way into his work, in ſpite, I may ſay, of his theory, very different concluſions from thoſe he draws may be deducible.

There are ſome grand claſſes of epidemics which prevail every year, and which are produced by the various changes of the ſeaſons. Thus, ſpring is accompanied by inflammatory diſeaſes; ſummer by complaints in the ſtomach and bowels; autumn by catarrhs; and winter by intermittents: theſe being obviouſly produced by the ſtate of weather attendant upon them, other epidemics are ſuppoſed analagous to them, and obedient to the ſame rules, which on examination not being the caſe, all further ſcrutiny is laid aſide, perhaps too haſtily. There is another reaſon why little has been attempted hitherto in this inveſtigation, which is, that we only of late poſſeſs tolerably accurate regiſters of the weather for any one place, and have as yet ſcarcely

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any of the diſeaſes that can be depended upon. There is likewiſe a very great diſagreement between the opinions of authors and the vulgar as to the hurtfulneſs of different kinds of weather, the former always aſſerting that dry ſeaſons are moſt noxious, whilſt the latter as conſtantly blame the wet. Now although in many points little weight is to be given to the ſentiments of the latter, yet in matters within their reach the caſe is otherwiſe, and in the preſent difference neither are totally right nor wrong; the truth ſeems to me as follows:

The moſt natural and healthful ſeaſons in this country are a moderately froſty winter, ſhowery ſpring, dryiſh ſummer, and rainy autumn; and whilſt ſuch prevail, the wet part of them is infeſted by vaſtly the greateſt proportion of complaints, but thoſe not of the moſt mortal kind. A long ſucceſſion of wet ſeaſons is accompanied by a prodigious number of diſeaſes; but theſe being mild and tedious, the number of deaths are not in proportion to the co-exiſtent ailments: on the other hand, a dry

ſeaſon

ſeaſon in the beginning is attended with extremely few complaints, the body and mind both ſeeming invigorated by it; if, however, this kind of weather laſt very long, toward the cloſe of it a number of dangerous complaints ſpring up, which as they are very ſhort in their duration the mortality is much greater than one would readily ſuppoſe from the few perſons that are ill at any one time; and as ſoon as a wet ſeaſon ſucceeds a long dry one, a prodigious ſickneſs and mortality come on univerſally. So long as this wet weather continues, the ſickneſs ſcarcely abates, but the mortality diminiſhes rapidly; ſo that in the laſt of a number of rainy years, the number of deaths is at the minimum.

The change of a long dry ſeaſon, whether hot or cold, to a rainy one, appears from all I can collect on the ſubject, to bring about the temperature of air favourable to the production of great epidemics; ſome however ſeem more ſpeedily to ſucceed the prediſpoſing ſtate of the air, others leſs ſo; or it may be that the ſtate of air favourable

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to them exists at the very beginning of the change, whilst the state favourable to others progressively succeeds: of this last, however, I am very uncertain, as it will be obvious on examining the order in which I shall immediately arrange them, that the first are of so overbearing a nature that they will force every other disease to hide its diminished head in their presence. It is also to be remarked, that two infectious diseases are almost never prevalent together; therefore, although the same distemperature of air seems favourable to most epidemic disorders, yet some must appear sooner, others later.

The order in which these disorders have a tendency to succeed each other, seems to be plague, petechial fever, putrid sore throat, with, or without *scarlatina*, dysentery, small-pox, measles, simple *scarlatina*, hooping-cough, and catarrh: I do not mean by this that they always succeed each other as above; for often the individual infection is wanting, when another takes its place, until perhaps that infection is imported

ported from a place which has been ſo unfortunate as to have a coincidence of the two cauſes, without which it appears that no epidemic can take place, that is a favourable diſpoſition of the air and that particular infection. Whenever it happens that one infectious diſorder takes the place that ſhould have been more properly occupied by another, it becomes much more virulent than it is naturally, whilſt the former, if it afterwards ſucceeds, becomes milder in proportion: this perhaps is the reaſon why the ſame diſorders, nay, the ſame appearances in a diſorder, are attended with much more fatality in one year than in another.

I ſhall proceed to give as conciſe an abridgment as poſſible of the materials from whence I drew theſe reflections, hoping that the deficiencies of the ſketch will be excuſed on account of the great difficulty of completing it. We have no compilation on this ſubject which can be at all depended on; Dr. Short's, although the moſt copious, abounding with the moſt unparal-leled

leled abſurdities and miſtakes; the materials therefore for this account was to be culled from a vaſt variety of authors; and my own collection, though conſiſting of above four thouſand volumes on medicine, is totally inadequate to ſo vaſt an undertaking.

Firſt Epidemic Conſtitution, 1590, 1591, 1592, all exceedingly dry years, as was part of 1593; afterwards very rainy weather until the end of 1597. In 1593 the plague killed eleven thouſand five hundred and three in London; the ſame year it was prevalent in Alcmar. A catarrh prevailed in 1597. The rainy weather began in Florence in 1592, during which a peſtilential fever raged there, attended with a whitiſh tongue, and an inflammation, with ulcers about the throat and mouth.

Second Conſtitution, 1598. An exceſſive heat and drought, which continued next year; 1600, a ſevere winter; 1601, a drought of five months continuance;

1602, a cold ſpring and ſummer, cold dry harveſt and winter; the reſt of this Conſtitution very rainy, until the end of 1608, except ſeven weeks froſt in 1607. In 1603 the plague was imported from Oſtend, where, and in the Low Countries, it raged much, and killed thirty-ſix thouſand two hundred and ſixty-nine in London.

Third Conſtitution. 1609, three months moſt rigorous froſt, wherein the Thames became like a ſolid highway; 1610, an exceſſive hot dry ſummer, as were thoſe of 1611 and 1612; 1616, 1617, and 1619. The winters of 1614 and 1615 great froſt and ſnow; the reſt of this Conſtitution wet until the end of 1624. In 1609 the plague broke out in Alcmar, as alſo in Denmark. In 1610 the Hungarian fever commenced in many places, and made great havock for ſeveral years, ſo as often to be denominated a plague. About the ſame time the malignant ſore throat is ſuppoſed to have commenced in Spain, where it killed incredible numbers. In 1611 the plague is ſaid to have deſtroyed two hun-

dred thousand at Constantinople. In 1614 the most fatal small-pox spread all over Europe. In 1618 the sore throat broke out at Naples, where it continued its ravages for twenty years; it was preceded by a similar disorder among cattle. In 1618 the plague in Bergen. In 1619 it broke out in Denmark and in Grand Cairo.

Fourth Constitution. 1625, a hard frosty winter, summer wet and hot; 1626 and 1627 excessively hot summers; 1630 and 1631 a great drought; the other years wet until 1634. In 1625 the plague killed thirty-five thousand four hundred and seventeen in London; it raged in Denmark both in 1625 and 1629; as also in 1625 in Leyden. In 1632 inflammations of the jaws prevailed, with an erysipelas in one or more places of the body.

Fifth Constitution. 1634, excessively frosty winter; 1635, 1636, 1637, and 1638, very hot and dry summers; then very rainy years until 1643. In 1635 the plague in Leyden, and the camp fever

spread

ſpread all over Germany. In 1636 the plague was in London, whereof died thirteen thouſand four hundred and eighty 1637 the plague in Denmark.

Sixth Conſtitution. 1643 and 1645, extremely hot ſummers, then inconſtant rainy ſeaſons until 1650. In 1643 a fatal malignant fever was ſpread by the armies all over England; 1644, a malignant epidemic fever in Denmark; a ſimilar fever in England, in which there was a roughneſs and ſlimineſs of the throat and jaws, with pain, but ſcarcely any ſwelling or inflammation, it ſeemed only a mere defluxion, by which the ſick ſeemed choked, and for which aſtringent gargles were uſeful. In 1650 a general catarrh.

Seventh Conſtitution. 1651 to 1659, all very hot ſummers and moſtly very dry years; thence to 1665 very wet. The winters of 1651 and 1658 remarkably cold. In 1651, in the country about Rome, a contagious epidemic quinſey prevailed, and made terrible ſlaughter among children.

A ſmall ulcer aroſe in the mouth, for which juice of wood-ſorrel, ſyrup of pomegranates with the bark, and, chiefly, ſpirit of vitriol were uſeful. All that took theſe medicines recovered, but thoſe who were not tractable, and refuſed medicines, died; it did not ſeize adults, nor the aged. In 1654 the plague was in Denmark; and in 1655, and the two following years, it prevailed exceedingly in the South of Europe; the agues likewiſe of theſe hot years were malignant, and ſpotted fevers were very common. In 1664, after a mild rainy winter, a malignant purple fever raged in Pruſſia, and killed great numbers under twelve years of age, thoſe only eſcaping who had no inflammation, or œdematous tumour in their throats. Such as recovered, after ſweating, had ſcales peeling off their ſkin; then adults had a ſwelling over their body and of their belly, which continued ſeveral weeks like leucophlegmatia, and then went off by ſweat and urine. This epidemic ſeems a conſiderable deviation from their general progreſs laid down in the ſcheme of them already mentioned,

tioned, and is therefore particularly noticed here.

Eighth Conſtitution. 1665, an exceſſively ſevere froſt, which continued to the end of March, ſummer temperate; 1666, a very hot dry year, followed by two as wet and cold. In 1665, immediately after the froſt, began the plague in London, which killed according to the leaſt computation, ſixty-eight thouſand five hundred and ninety-ſix; ſince that time the plague has vaniſhed from this city, and all other epidemics ſeem to have become leſs malignant, owing to many cauſes; among which may, perhaps, be a greater uſe of freſh vegetable food, a leſs uſe of fiſh, an univerſal uſe of tea, ſuperior cleanlineſs in our perſons, a greater attention to our poor in times of ſcarcity, which are now ſcarcely felt in any extreme degree, and, laſtly, the tremendous fire in 1666, ſince which the ſtreets have been very much widened, and the houſes ſo enlarged, that the ſame number of inhabitants now occupy above double the ſpace. In 1667 an epidemic

fever with a thruſh prevailed in Holland, in which acids were uſeful, but neither bleeding nor purging.

Ninth Conſtitution. 1669, the ſummer intolerably hot, after which the winter was as ſeverely cold and froſty; 1670, ſevere froſty winter; the reſt of this Conſtitution bad and wet. In 1669 a moſt fatal fever prevailed, with ſlimy tongue, ſore mouth, &c. in which bleeding was hurtful, but acid and laxatives moſt beneficial. Sydenham does not mention this fever, nor its return in 1678, although, next the plague, they were they greateſt epidemics in his time; which, together with his little knowledge of putrid fevers, can only be attributed to his practice lying about the court: whilſt Morton, who practiſed in the city, gives abundant proofs that putrid complaints were as prevalent then as at this time. The ſame year in Norway malignant meaſles are ſaid to have prevailed with a thruſh, which, if miſmanaged or neglected, ended in a fatal mortification. In 1675 a coryza or cough prevalent.

Tenth Conſtitution. 1678, ſummer and harveſt droughty, hot, and clear; 1679, winter long, ſevere froſt, and intenſely cold; 1680 and 1681, ſummers extremely dry and hot; the next two years rainy. In 1678 the ſame fever and ſore throat prevailed as in 1669. In 1679, after a moſt deluging October, a catarrh was univerſal. In 1682, ſphacelated tongues and *Angina Maligna* prevailed among cattle; in the ſame year in Dublin a fatal petechial fever.

Eleventh Conſtitution. 1684, the ſevereſt froſt remembered at that time, ſucceeded by a very dry and hot ſummer, to which 1686 bore a near reſemblance; the other years were rainy to 1691. In 1684 ſpotted fevers, particularly of the miliary kind, were common. This and the following year of 1685 are remarkable for the greateſt number of burials; from 1665 to 1714, although 1684 does not contain St. James's, Weſtminſter, and neither 1684 nor 1685 contain St. Ann's, Weſtminſter, nor St. John's, Wapping, pariſhes which are in-

ſerted in every future bill of mortality, and which then buried above ſixteen hundred annually at a medium. In 1688 an epidemic catarrh prevailed all over Europe.

Twelfth Conſtitution. 1691, a froſty winter and exceſſively hot and dry ſummer. The ſame in 1694, the other years rainy and variable. In 1691 a fatal ſpotted fever prevailed; in 1693 an univerſal catarrh; and in 1695 the hooping cough.

Thirteenth Conſtitution. 1698, exceeding hard froſt in the winter; the reſt of this Conſtitution rather rainy. In October 1698, began a fatal contagious ſpotted fever, which ſpread all over England. Coughs attended moſt diſeaſes in 1703.

Fourteenth Conſtitution. 1704, ſo exceſſively dry a year that all graſs was burnt up; this continued until Auguſt 15, 1705; the reſt of this Conſtitution cold and wet. In 1704 malignant ſpotted fevers were common. In 1708 coughs and coryza's prevailed every where, ſo that few eſcaped.

Fifteenth

Fifteenth Conſtitution. 1709, an exceedingly great froſt all over Europe, and even in Portugal; 1712, a very froſty winter; the reſt of this Conſtitution variable. In 1709 the plague broke out in Dantzick immediately after the thaw, and killed twenty-four thouſand five hundred and fifty-three. In 1710 the plague in Copenhagen killed twenty-five thouſand. In 1712 ſore throat univerſal in July and Auguſt, with dizzineſs and pains of the limbs, in London.

Sixteenth Conſtitution. 1714 and the ſix ſucceeding years were all dry with hot ſummers. The winter of 1716 ſo ſevere a froſt that the Thames was covered with booths; that of 1718 likewiſe very froſty; the reſt to 1731 cold, wet, and variable, except 1723, which was cold and dry; and 1729, which was a cold, dry winter, followed by a hot, dry ſummer. In 1720 the plague killed ſixty thouſand in Marſeilles. In 1729 an univerſal epidemic catarrh in November.

Seventeenth Conſtitution. 1731 was

a very dry year which continued until harvest 1732; ſummer of 1733 rather dry and pleaſant, as was moſt of 1738; the remainder of this Conſtitution extremely wet. In the beginning of 1733 was an epidemic catarrh; 1737, 1738, and 1739, were all much infeſted with catarrhal fevers, eſpecially among children.

Eighteenth Conſtitution. 1740 was the ſevereſt froſty winter and ſpring that had happened for three hundred years; 1741, extremely dry, hot ſummer; 1742, a variable, but dry year; the reſt of this Conſtitution wet or variable. In 1740 a malignant petechial fever made great havock in Briſtol, and in Galway in Ireland. In 1741 it reached London, where this and the laſt year were the moſt mortal ever known, except when the plague reigned, the burials amounting to ſixty-two thouſand nine hundred and eighty. In 1742 the putrid ſore throat broke out. In March 1744 an epidemic catarrh was univerſal, and was more fatal than uſual.

Nineteenth Conſtitution. 1747 was

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an exceſſively hot, dry ſummer; 1750, a dry year throughout, and intenſely hot ſummer; the reſt of this Conſtitution moderate, variable, or wet. In 1747 and the ſucceeding years the ſore throat ſeemed to acquire new vigour, alarming the inhabitants of theſe kingdoms very much. In November 1758 was an univerſal epidemic catarrh.

Twentieth Conſtitution. 1760 was droughty from June 26 to September 16; the end of that and the following year ſeverely wet, as was the end of 1763 and beginning of 1764; the reſt of this Conſtitution moderate. In April and May 1762, a moſt epidemic catarrh.

Twenty-firſt Conſtitution. 1765 a very dry year, and rather hot ſummer, as was the next year, though not quite ſo much ſo; the remainder of this Conſtitution moderate years, rather inclining to wet. During this Conſtitution I do not find any very remarkable epidemic until the univerſal catarrh in November 1775, unleſs we reckon the

the ſmall-pox ſo of the year 1772, which, ſucceeding a hard winter, killed more than they had ever done in one year in London.

Twenty-ſecond Conſtitution. The year 1776 was dry, and 1778 ſtill more ſo. The winter of 1780 was the moſt froſty ſince 1740; yet theſe deviations from what might be accounted moderate weather were ſo ſmall as ſcarcely to deſerve notice. In May 1782 was a very general epidemic catarrh.

Immediately after the laſt mentioned year began the Conſtitution which has produced the preſent epidemic.

Thus have I given a curſory view of the weather, and ſome of the epidemics of the laſt two hundred years, and have purpoſely dwelt moſt on the extremes; that is, thoſe of the greateſt and of the leaſt malignity, that by omitting the middle ones the difference might be moſt ſtriking. Any perſon that chooſes may divide the years differently, and indeed at firſt I had done ſo myſelf; yet it will ſtill be found, I

think,

think, that the ſame deductions as thoſe I firſt laid down will hold good: ſhould this trifling ſketch beſides excite any one who has more leiſure and opportunities to beſtow adequate pains upon the ſubject, I ſhall gain my end; and if he ſimply follows whitherſoever truth leads, I doubt not that much public utility will be the conſequence. By inveſtigating minutely every circumſtance that tends to produce or impede theſe infectious complaints, may we not hope in time to be able to obviate much of their malignity, and perhaps at laſt entirely to ſtop their courſe. The plague is now ſcarcely known in the weſt of Europe, and the numbers that fall ſacrifices to the ſmall-pox are the victims of obſtinacy and bigotry. Having conquered theſe gigantic epidemics, ſhall phyſicians dread being able to prevent pigmy ſcarlatinas or catarrhs. Experiment has carried natural knowledge far beyond the apparent powers of man, and juſt obſervation, unſophiſticated by theory, will carry medicine to a degree of perfection of which our preſent feeble conjectural art ſeems utterly incapable.

ARTICLE

ARTICLE XXXIII.

History of a Gangrene of the Scrotum: By LEVERETT HUBBARD, M.D. *of* NEW-HAVEN *in* CONNECTICUT: *In a Letter addressed to the* MEDICAL SOCIETY *of* LONDON.

Read October 2, 1786.

THE reputation of the Medical Society of London induces me to communicate the following extraordinary Case for insertion in their Memoirs.

Mr. S—— H——, of this city, aged forty years, a temperate man, and of a good constitution, by profession a Shoe-Maker and Tanner, was seized with an intense pain in the glands of the left groin, on September the 19th, 1784.

September 20th. I was sent for, and the messenger told me that the pain was intolerable;

lerable; but I was engaged another way, and concluding that the diſorder would ſubſide with an anodyne, I ſent him one.

September 21ſt. I viſited the patient, and found him in an high fever; the *ſcrotum* and *penis* greatly tumified, and of a livid colour; I immediately opened a vein, and took away ſeventeen ounces of blood, which was as buffy as is uſual in a violent pleuriſy, with very little ſerum; I ordered a fomentation of bitter herbs boiled in water, to which was added rum. After uſing the fomentation, I applied a cataplaſm of white-bread, milk, and white-roſe leaves, and I ordered him to take a few doſes of camphorated nitre.

September 22d. I found him ſtill under an high fever, and took twelve ounces more of blood, which was leſs buffy than on the day before; the parts affected now appeared in a ſtate of mortification, black, and inſenſible to the touch; I ſcarified the *penis* and the *ſcrotum* in ſeveral places, without giving pain to the patient, and then

then applied ſtrong ſpirits and the cataplaſms as before; gave him a table ſpoonful of the *Cortex Peruv.* and ordered him to take a like doſe every two hours, to be waſhed down with a ſtrong decoction of the ſame, with the addition of red-roſe leaves.

September 23d. The tumor and inflammation were ſomewhat abated; he complained of pain in two of his fingers of the right hand, on which I obſerved tumors much inflamed, of a ripe cherry colour.

September 24th. The *carpus* of the ſame hand tumified and inflamed, and of a livid hue: I continued the ſame preſcriptions, with the addition of an emollient clyſter.

September 25th. I found his pulſe low, with great faintneſs and dejection of mind, apprehending that death would ſoon cloſe the ſcene. I ordered him ſome wine, which raiſed his ſpirits and abated his gloomy apprehenſions,

apprehenſions; and continued the dreſſings as uſual. I opened a tumor on his wriſt, which diſcharged purulent matter.

September 26th. I requeſted the aſſiſtance of my friend Dr. Neſbitt. We found the patient under an high fever, and bled him the third time, though we conſidered the caſe almoſt deſperate; we continued the bark, with the elixir of vitriol, which was given with the utmoſt freedom, without any regard to the fever, as we judged it eſſential to the patient's recovery. In three days there came on a digeſtion and ſeparation of the mortified parts, which by degrees were removed by the knife; we dreſſed the ulcer with dry lint, ſometimes making uſe of ſpirits and the common digeſtive, till the whole of the *ſcrotum* was taken off, leaving the teſticles uncovered with the *paraſtatæ*; after the *ſcrotum* was ſloughed off, the ſtate of the juices were ſo acrid as to deſtroy two other coats, the *cremaſter* and the *tunica vaginalis*, which digeſted, and alſo ſloughed off, leaving the *tunica albuginea* in a ſound

 ſtate;

ſtate; he had violent pain in the teſticles, and there was reaſon to ſuſpect ſuppuration; when preſſed with the finger the parts were very elaſtic, which induced us to think that there was matter contained within: accordingly, we made a ſmall puncture through the *tunica albuginea*, but the diſcharge was only a bloody ſerum; we continued the ſame treatment; the teſticles ſuffered the ſame very painful ſenſation for ſeveral days, and we concluded that matter was formed in them, and opened one of them to its centre to aſcertain it, but found only a diſcharge of bloody ſerum; the wounded teſticle was dreſſed with a digeſtive, and healed in a few days, at which time the ſurface of the teſticles next the *perinæum* began to granulate and to heal very faſt, and cauſed an adheſion, or union of the teſticles, from each extremity, which now reſembled a twin peach or apple; the ſpermatic chords ſuffered a great contraction, and the teſticles adhered cloſely to the *perinæum*, and cicatrized favourably.

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The *preputium* was entirely taken off the *penis*, the muſcles were diſeaſed, and partly deſtroyed, the urethra was left without a covering, but the bulb or glans was not affected; a covering however gradually formed over the body of the *penis*, but leſs ſmooth than before. Soon after the diſcharge from the mortified parts abated, he complained of pain in the left ſide of the *abdomen*, which extended up as far as the ſhort ribs, it was here tumified and inflamed; whereupon we ordered that part to be fomented four or five times a-day with warm ſpirits, and the inflammation and ſwelling ſoon diſappeared: two or three days afterwards a pain came on in the right ſide, extending as it had done on the left; we applied the ſpirits as before, but without effect; we then ordered the application of a cataplaſm, which ſoon brought on a ſuppuration; we perforated the ulcer, and it diſcharged a large quantity of *pus*, which continued more or leſs for ten days; the patient remaining very feeble and greatly emaciated with fever, we ordered a decoction of barley with

figs, ſago, ſalop, and panada (gruel had been his uſual diet with a little wine) and he continued recovering for the ſpace of ten days, when he was ſuddenly ſeized with a pain in his bowels, ſucceeded by a fœtid diarrhœa; in twenty-four hours he was greatly reduced, frequently diſcharging two, or three ounces of purulent matter, attended with a bloody mucus; we gave him lenient purges, ſuch as ſenna, manna, and a ſolution of gum arabic, in barley-water; clyſters prepared with a decoction of the bark and red roſe leaves were frequently adminiſtered; theſe in a few days gave relief, and the matter of the internal ulcer being diſcharged through the rectum, the patient recruited every day, and on December the 5th, 1784, was able to attend his former buſineſs.

In forty-nine days he took fifty-eight ounces of that ſovereign medicine the bark, which ſeemed to contribute in a great meaſure to his perfect recovery.

ARTICLE

ARTICLE XXXIV.

A large Exfoliation of the Tibia removed by Mr. THOMAS WHATELY, F. M. S. *Surgeon: Communicated by* JOHN COAKLEY LETTSON, M. D. &c.

Read December 11, 1786.

THE following Caſe is ſubmitted to the Public, not for its novelty, but as an inſtance, ſhewing to what extent Nature is able to operate, and how cautious we ought to be in determining on the neceſſity of amputation.

William Olave, No. 7, Parſon's-Yard, Shoreditch, aged forty-one, of a healthy conſtitution, was attacked on the 18th of March 1783, with a violent pain near the inner ancle of the left leg. It continued day and night with unremitting violence, rendered him incapable of walking, and deprived him of ſleep. An external inflam-

mation soon appeared upon the lower part of the Tibia, which in ten days suppurated and broke. Though the pain was then less severe, it confined him chiefly to his bed for nine months. He applied at different times to different surgeons for relief; one of them advised him to have it taken off without delay; being unwilling to consent to the operation, he applied to a public institution, was twice visited by the surgeon, who each time pressed him to lose his leg; but being still averse to it, was dismissed without relief. At this time I first saw him, and found the disease to extend more than six inches along the Tibia, just above the inner ancle; the bone was bare in several places, and in others were many ulcerated holes in the integuments; he had also much pain and inflammation, with a fluctuation of matter just above the outer ancle, and was much emaciated.

Having opened the abscess by the side of the fibula (which was found to communicate with the diseased Tibia), I tried

whether the bone was looſe, but could not move it, till a ſtrong ſharp-pointed inſtrument was fixed upon it, and even then the motion was barely perceptible on puſhing it ſide-ways. I next deſtroyed by cauſtics all the fungous fleſh and integuments [x], covering thoſe parts of the diſeaſed bone that were not bare, which gave me a good view of the whole diſeaſe. As the exfoliation was very large, I found Nature had been active in repairing the defect, and the preſence of the dead bone preventing a depoſition of oſſific matter in its proper place, a conſiderable layer was added to the outer edge of the Tibia (being the only part unexfoliated), by which it became nearly as ſtrong as before: the ſame proceſs was con-

x A large portion of the Tibia was already bare, and it was abſolutely neceſſary to deſtroy by cauſtics the fungous granulations and integuments which covered, but did not adhere to the other parts of the bone, as well as thoſe which hung over the edges of it; for while this impediment remained, neither the new-formed bone could have been removed, nor the exfoliated piece taken out; nor did it occaſion any want of integuments at the cloſe of the cure, for as the wound contracted, the old integuments approached on each ſide ſo near as perfectly to cover the place where the cavity had been.

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tinued from the upper edge of it, and extended ſo low as to cover a large part of the exfoliated piece by a layer of oſſific matter a quarter of an inch in thickneſs. This portion of the layer I removed piece-meal, by means of a levator, to make way for the exfoliated piece, which in one place being nearly divided, I completely ſeparated by applying a trephine, and readily removed the upper part, which was two inches in length and one in breadth. The lower portion of the exfoliated bone could now be moved more eaſily, and having made ſeveral unſucceſsful efforts either to extract it whole by the common forceps, or to divide it by the trephine, I at length procured a pair of large and ſtrong pincers, with which I gradually attempted the extraction in all directions; it ſeemed jammed in on every ſide, but by a little perſeverance, that part next the ancle gave way, and ſhortly afterwards I extracted the whole, leaving a large chaſm ſix inches in length, three in breadth, and in the part next the ancle, three in depth; this piece weighed an ounce and a half, was nearly four inches long,

long, and two-thirds of the ſubſtance of the Tibia and cancelli. Dry lint, and an emollient poultice were applied to the leg: the firſt night he was very reſtleſs, but the next, ſlept more than he had done for many preceding months. On the third day an eryſipelatous inflammation began to ſpread upon the leg, but ſoon ceaſed by the uſe of bark and wine. When the firſt dreſſings were digeſted from the wound, I extracted a conſiderable piece of the cancelli, and afterwards ſeveral other pieces of bone; but the fiſtulous ſore on the oppoſite ſide of the leg remained open, till a large looſe part of the external ſide of the Tibia was removed from the bottom of the wound, after which it healed up.

Though ſix weeks after the firſt operation, he was able to walk two miles to be dreſſed, a looſe piece of exfoliated bone ſtill remained at the upper part of the wound, which I could not extract; but having deſtroyed the granulations ſurrounding it, by cauſtics, I found that it paſſed upwards, under an arch of the Tibia,

within

within the cancelli. To ſet this piece at liberty, I expected that I ſhould have been obliged to work with the trephine through the ſound Tibia (which in this place was near an inch thick) but, happily, I divided it by force with a levator into two parts, and with the forceps readily extracted them, each being an inch long, and part of the internal *lamina* of the Tibia. This large cavity ſoon filled up with granulations; in a few months every part of the wound was perfectly healed; and he now maintains a wife and large family by hard labour.

This diſeaſe ſeems to have ariſen from the violence of a ſuppurative inflammation, unconnected with any peculiar virus, which occaſioned a mortification of a large portion of the Tibia, and the dead part being of an irregular form, and firmly linked within the ſound bone, was neceſſarily prevented from having a free motion; and though perfectly ſeparated from it, the ordinary powers of nature were unable to caſt it off; force alone could remove it,

which inevitably broke off thofe parts that were afterwards taken away.

Some years fince I removed with fuccefs, almoft in the fame manner, a large exfoliation of the Tibia, from the leg of Jane Bantam, of Edenfor, Derbyfhire, which was deemed incurable. The exfoliated piece was longer than that in the prefent cafe, and confifted of the whole external fubftance of the Tibia.

ARTICLE

ARTICLE XXXV.

Memoirs of JACQUES BARBEU DUBOURG, *Professor of the* FACULTY *of* MEDICINE *of* PARIS; *Member of the* ROYAL SOCIETY *of* SCIENCES *of* MONTPELLIER, *of the* MEDICAL SOCIETY *of* LONDON, *and of the* ROYAL MEDICAL SOCIETY *of* PARIS; *of the* ACADEMY *of* SCIENCES *of* STOCKHOLM, *and of the* AMERICAN PHILOSOPHICAL SOCIETY *of* PHILADELPHIA: *By* J. C. LETTSOM, M. D. &c.

Read February 25, 1787.

To the MEDICAL SOCIETY *of* LONDON.

IT was not till the beginning of this month, when the volume of your Memoirs was nearly printed, that you determined to "preserve ſome honourable "memorial of former aſſociates who may "be removed by death," and appointed me to prepare ſome account of my late honoured friend Dr. DUBOURG, who was the firſt corresponding

corresponding member elected into our Society[2]. Short as was the time allotted me for effecting it, I accepted the appointment, more from the desire of offering a grateful tribute to his memory, than from a presumption of ability to do justice to it. As I had not the honour of his acquaintance till the year 1773, I am compelled to draw the Memoirs of his Life, till that period, from the Eloge, published in the second volume of the *Histoire de la Société Royale de Médicine*.

JACQUES BARBEU DUBOURG was born at Mayenne, on the 15th of February 1709, at which place he received the rudiments of his education; here his improvement was rapid, for at the fifteenth year of his age he had so far completed his education, as to resolve upon that plan of life which seemed destined for his future attachment and cultivation. He had two brothers, who had devoted themselves to the church, and probably fraternal affection, more than moral constitution, early biassed his mind

[2] On the 5th day of October, 1773.

to

to purſue the ſame path; and from this motive, the ſtudy of theology now occupied his attention; in the purſuit of which he acquired a critical knowledge of the Hebrew, and he has ſince been frequently conſulted in the interpretation of the moſt difficult paſſages in this ſacred language.

As a ſcholar, and as a moraliſt, this amiable youth might be deemed worthy of the prieſthood; but when the period arrived that the irrevocable oath eſſential to aſſuming the ſacerdotal office was to be exacted, that for ever binds the prieſt to the altar (and which can never be pronounced without the riſk of ſacrilege), his mind, in which the ſeeds of freedom early germinated, revolted at the proſpect of perpetual reſtraint, and made him abandon a choice that was primarily dictated by the example of thoſe he moſt loved, rather than by conviction of judgment.

Freed from the ſhackles of theological ſtudies, he cultivated literature in general, as much more congenial to that liberality of mind,

mind, and favourable to that ſpirit of independence, which conſtituted the moſt prominent features in his character.

In the gratification of his own unbiaſſed taſte, poetry and hiſtory became his favourite ſtudies, to which he united thoſe more immediately connected with medicine; though it was not till the thirty-eighth year of his age that he offered himſelf before the Faculty of Medicine of Paris, into which body he was admitted in the year 1748, after having maintained his Theſes with great ſpirit and diſtinguiſhed reputation [b]; but prior to this period he had evinced his attachment to the ſcience of medicine by his defence of it againſt the College of Surgery [c].

His

[b] His Theſes were,

1. Daturne etiam vitalium organorum ſomnus? aff. 1746.
2. Utrùm anni climacterici cæteris periculoſiores? neg. 1747.
3. An Variolarum morbus abſque eruptione? aff. 1747.
4. An Trachæotomiæ nunc Scalpellum, nunc trigonus mucro? affirmat, 1748.

[c] Lettre, &c. à l'abbé Desfontaines au ſujet de la maîtriſe-ès-arts. 1743, in 12mo.

Deux

His reception into the faculty of medicine interrupted not his literary labours; the correſpondence which he maintained with the learned in England and Italy, rendered it requiſite for him to acquire the languages of theſe reſpective countries. His friendſhip with the celebrated Lord Bolingbroke more particularly inſpired him with a taſte for Engliſh literature, and he tranſlated with ſucceſs this nobleman's letters on Hiſtory, from Pope's edition in 1738 [d], to which he added a tranſlation of an ingenious and philoſophical letter by Lord Bathurſt, upon the advantages of retirement, which teaches us the knowledge of ourſelves in the ſweet enjoyment of meditation; and upon the utility of ſtudy, which in multiplying the ſources of virtue and happineſs, helps us to deſerve the eſteem of men, and as much as poſſible to live without them, and in exile is equally uſeful to the wiſe man as to the

Deux lettres a une dame au ſujet d'une expérience de Chirurgie faite à la Charité, le 22 Juin 1744. Paris, 8vo.

[d] Lettres ſur l'hiſtoire, traduites de Bolingbroke, 2 vols. 12mo. Paris 1752.

ſool,

fool, ſince by it the one finds repoſe, and the other his reaſon.

Man, who is but an atom on the *Globe*, and whoſe exiſtence on it is tranſitory, has by his induſtry, and by his indefatigable curioſity, diſcovered the relations of the parts of which it conſiſts, and aſcertained the periods of the revolutions which they have undergone. Two ſciences, *Geography* and *Chronology*, have been the reſult of theſe reſearches, and it is upon theſe that the knowledge of hiſtory is founded: the whole extent of the earthly globe, in the ſtrict ſenſe of the firſt, is but a circumſcribed ſpace, which it meaſures with preciſion, according to the dimenſions of its heighth and breadth, upon which the immenſe ocean, the courſe of rivers, and the chain of mountains are inſtantly perceived, and which preſents in a ſingle table all the known climates, ranged according to the proportion of their diſtances. The ſecond traces and adjuſts the ſucceſſion of events; leſs compounded than *Geography*, the objects of which it treats, like time,

 have

have but one dimenſion, that of their duration. *Chronology* hitherto had not been reduced on tables; DUBOURG had the merit of conceiving this arduous deſign in thirty-five plates[d], which placed together, and rolled upon two cylinders, imitated the revolution of centuries, and compoſed a chronological table, extending to the year 1753, when our author wrote.

After having thus diſtinguiſhed himſelf as the hiſtorian of all nations and ages, he conducted a journal of medicine, entitled, *Gazette d'Epidaure*[e], which continued three years, and contained many practical and intereſting obſervations.

Sometime afterwards, the phyſicians and ſurgeons of Paris were much divided on a medical legal diſquiſition on the duration of geſtation, and the time of parturition;

[d] Theſe were preceded by an explanatory diſcourſe. Tables have been ſince formed in England by Dr. Prieſtley, Dr. Blair, and Dr. Playfair.

[e] Gazette d'Epidaure, ou Recueil hebdomadaire des nouvelles de medicine, &c. Paris, 1761—63, 8vo. 4 vol.

which

which was conducted with great heat and acrimony by the different parties: Dr. Dubourg was engaged in this controversy, and distinguished himself by a valuable and elaborate publication [f], by which he acquired additional fame and reputation, like the late Doctor Hunter, upon a subject not very dissimilar: this amiable physician was on the side of humanity; for a mind endued with sentiments of honour and virtue, is the least liable to suspect the want of them in others.

To the cultivation of *Botany* he devoted much of his time. His garden, which contained a large assemblage of plants, was open to students, and the lovers of Botany; and in 1767 he published a copious work [g], explanatory of his new method of arranging plants; which also comprised many

[f] Recherches sur la durée de la grossesse et le terme de l'accouchement. Amsterdam, 1765.

[g] Le Botaniste François, comprenant toutes les plantes communes et usuelles, disposées suivant une nouvelle méthode et decrites en langage vulgaire, 2 vol. 12mo.

curious eſſays on the nature of diſeaſes and their remedies.

In perſon, Dr. DUBOURG was ſomewhat above the middle ſtature, and full, but not groſs in figure; of a fair complexion, and great affability in his countenance, with a firmneſs, at the ſame time, in his features, which conveyed the idea of the union of dignity of mind, with ſoftneſs of manners: with a conſtitution thus organized for the happy acquirement of confidential intercourſe, his underſtanding was refined and improved by the cultivation of letters, and deep reflection on man, in the moſt extended view; this is particularly evident in his "*Code de la raiſon humaine*[h];" in which he firſt conſiders him in his individual exiſtence, and afterwards purſues the inveſtigation through all his relative duties in life; as the member of a family in the patriarchal ſtate, till he becomes a citizen of the world, in the moſt enlarged and philoſophical view, formed for communicating hap-

h Petit code de la raiſon humaine, ou Expoſition ſuccincte de ce que la raiſon dicte à tous les hommes, &c. 1773.

pineſs

pineſs to others, and of participating in it, as flowing from the divine and inexhauſtible ſource.

A mind actuated by ſuch ſentiments of urbanity, muſt be peculiarly prone to the intercourſe of the moſt generous and ſocial affections, which begets friendſhips, founded upon ſincerity, and unites friends in indiſſoluble bonds of amity. In this ſacred union, the beſt and wiſeſt of men have been the moſt choice in forming connections, which influence and improve the deareſt enjoyments of life. Dr. DUBOURG, with an affability of liberal and eaſy manners, maintained a ſcrupulous caution in forming his friendſhips: often has he ſaid, "*J'aimerois mieux, avoir un* "*honnête homme pour ennemi, qu' un fri-* "*pon pour ami.*"

About the middle of the eighteenth century, there aroſe a luminary in the new, whoſe radiance was perceptible in the moſt enlightened nations of the old hemiſphere. It was in that province, which not a century before, was the ſeat of ſava-

ges, wherein *Penn* diffuſed the mild ſpirit of legiſlation, and of religion, that *Franklin*, a native of Boſton, firſt burſt forth upon the philoſophical world, and realized, what the warm imagination of poets had aſcribed to Prometheus. But the fire which the enterprize of his great mind had ſnatched from heaven, he controlled; and rendered one of the moſt active and tremendous agents in nature, ſubſervient to his direction, and to that of poſterity.

Our departed aſſociate was admitted into the friendſhip of this great philoſopher early in the year 1773, and ever afterwards continued one of his moſt intimate and boſom aſſociates; and it was our colleague that had the honour of diffuſing the knowledge of the electrical philoſophy throughout France and the continent of Europe, by the publication of *Oeuvres de Mr. Franklin.*

About this time I viſited Paris, from whence *Franklin* was recently returned, who gave me a letter of introduction to

Dr. Dubourg, part of which he publiſhed in the ſecond volume of *Franklin's Works,* and this was the firſt inſtance of my name being recorded in print.

In France, where literature has begot a ſpirit of free inquiry, a zeal for liberty and the rights of mankind, has been gradually diffuſed, and a paſſion for patriotiſm has pervaded their confidential circles, and particularly influenced the character of the youth. Our colleague, whoſe love of freedom and dread of reſtraint, had determined him, at his ſixteenth year, to relinquiſh proſpects of advantage for the liberal purſuits of philoſophy, had the ſame independency of mind, confirmed by the maturity of judgment; his recent, but intimate connexion with *Franklin,* animated his zeal for the proſperity of naſcent republics; and in his ſixty-fourth year *he was the firſt ally that America could claim in France.*

There is an union between the ſexes of heart and ſoul; of ſublime friendſhip, founded upon unlimited affection, which places

man in the first and most endearing situation he can possibly enjoy; and few partook of the blessings of connubial felicity in a more exalted enjoyment than DUBOURG. That man is depraved beyond redemption, who, insensible to female endearments, prides himself in an apathy which deprives him of the finest feelings annexed to his nature: not so, with the physician and philosopher whose loss we regret, and whose memory we gratefully record; who, sensible of domestic felicity, gloried in his conjugal attachment, and wreathed in a civic crown, laurels of public fame, in dedicating to his bosom companion, *Le Botaniste François*, a work published in 1767, in two duodecimo volumes.

As he was devoted to her in the tenderest affection, he bemoaned her decease, which happened in August 1777, with tears of affliction, which nothing could wipe away but time, and the consolations of religion and philosophy. His letter to me, which announced this melancholy circumstance, I have repeatedly read, and as often admired the

the melancholy expreſſions he indulged in his loſs, and the Chriſtian ſubmiſſion with which he endeavoured to ſupport it. The ardour of youthful affection is diſtinguiſhed for generous warmth; but as it is often formed from paſſion, rather than judgment, it dazzles, but does not conſume; and the fires of youth are ſooner extinguiſhed than the embers of age: DUBOURG mourned his loſt mate till death placed them in the ſame cemetery. He was attacked by a fever early in December 1779, of which he died on the 13th, in the ſeventy-firſt year of his age.

Religion, the firſt gift of heaven to man, calculated to promote his happineſs here, and to ſecure it in futurity, has too often been perverted to the worſt of purpoſes; inſtead of diffuſing mutual happineſs, it has been the engine of mutual injuries; but the philanthropy of DUBOURG embraced the amities of the goſpel, and univerſal toleration was the ardent wiſh of his heart. The addreſs of Barclay to the Prince then on the Britiſh throne, which for boldneſs and truth

is

is unequalled in hiſtory, he often read to circles of his acquaintance; and in the liberal warmth of his heart, he thus concluded it, "May I live to ſee that ſect, to "whoſe opinions Barclay gave a ſyſtem, "eſtabliſhed in France." Little did I then think that the prayer of DUBOURG would be realized by the policy of De Vergennes; that the Quakers of Nantucket would find an aſylum in 1787 in the boſom of France.

It is not the prince alone, ſupreme as he is, that forms the genius of an empire; it is the gradual evolution of ſentiment in the people, which is ſlow in its progreſs, but permanent in its duration: this ſhould encourage every good citizen to exertion, in gradually diffuſing among the people juſt and virtuous principles, which ultimately conduce to private and public happineſs: every man has his circle of influence, and ſo far as he extends the light of truth, he contributes to improve mankind; and I am perſuaded, that the liberal ſpirit of toleration, which Dr. DUBOURG long and uniformly promoted, conduced

with

with the efforts of others, to prepare the minds of the French for a ſyſtem of religious toleration, to which they would not have been reconciled, at any period, ſince the revocation of the edict of Nantz, till the Auguſtan age of Lewis the ſixteenth.

May the beneficent ſpirit of philoſophy, that inhabited the breaſt of our departed aſſociate, inſpire the rulers of the earth, to extend to man the privilege of addreſſing his Creator, in the language of his own heart, to whom alone he is finally amenable for his faith and for his actions.

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